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FEATURE:
JSPS Prize

TOPICS

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FEATURE

Fifth Award of JSPS Prize

On 9 March, a ceremony was held to award the fifth 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 FY2008 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 3,079 Japanese research institutions and academic societies, from which it received 214 in May. Adding the carryovers from the prior year, 374 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 (chairman of the Science and Technology Promotion Foundation of Ibaraki and president of Yokohama College of Pharmacy) and comprising 13 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 9 March, JSPS president Prof. Motoyuki Ono offered an opening message, followed by a report on the selection process from Dr. Esaki. Prof. Ono presented the 24 recipients with a certificate of merit, a medal and a purse of ¥1.1 million.

A ceremony was, then, 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 Dr. Sogo Okamura, 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, followed by Mr. Masami Zeniya, Vice Minister of Education, Culture, Sports, Science and Technology, who read a congratulatory message from the minister. To conclude the meeting, a message of appreciation on behalf of the Prize recipients was delivered by Dr. Schuichi Koizumi, professor, Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi.

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.

JSPS Prize

The JSPS Prize was established in FY 2004 with an objective of advancing scientific research in Japan at the world's highest standard. It does this by recognizing at an early stage in their careers young researchers rich in both talent and creativity. The Prize is meant to encourage the young recipients in advancing their work.

The Prize is awarded to Japanese researchers and to overseas researchers who have conducted research at a Japanese research institution for five years or longer. They must have published papers or articles in scientific journals and other publications in Japan and/or abroad, and obtained excellent scientific research achievements. As of 1 April of the Prize year, they must be (1) under 45 years of age and (2) have obtained a doctorate degree (or possess an equivalent level of scientific research expertise).

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 fifth annual JSPS Prize and to offer some words of encouragement to the young recipients.

In April 2008, a request for referrals was sent out to universities, research institutes and related academic societies. Altogether 374 individuals were nominated to the Selection Committee. For a period of approximately five months from June 2008, 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 Selection Committee, comprising 13 members, would choose the recipients for the fifth JSPS Prize.

On 18 November 2008, the Committee met to select this year's 24 awardees. As there were many excellent candidates, the vetting process was at times impassioned, but ultimately the recipients were selected based on a strict and careful appraisal of their respective research achievements.

I am pleased to take this opportunity to extend a hearty congratulations to each of you awarded the JSPS Prize via this highly competitive process. I also congratulate the colleagues who have supported your work to date.

As you all know, US President Barack Obama gave his first policy speech on 24 February, in which he stressed the need to develop clean energy and the importance of basic research. He had just given his inaugural address on 20 January, in which he said, "We will restore science to its rightful place." I took this to mean that he would value the views of scientists while according science greater respect than had the previous administration—that, for example, under the Obama administration, America would strengthen its measures to mitigate global warming. As his Assistant for Science and Technology, President Obama selected Harvard professor Dr. John Holdren, who is well versed in environ-

mental science, and as Secretary of Energy, he appointed Dr. Steven Chu, 1997 Nobel laureate in Physics. Dr. Chu belongs to a distinguished family of Chinese-American academics.

Ten years ago in 1999, I invited Dr. Chu to participate on the panel of an international conference held in Tsukuba, Japan. As its theme two questions were posed: "What sort of advances will science make in the 21st century?" "What advances can be anticipated in each of your fields?" These are questions that I'd also like to ask you. At that conference, the answers given by the panelists, who were engaged in various projects, evoked a discussion on how science can contribute to creating a bright future.

I would like to paraphrase Dr. Chu's answer as I recall it. He said, "There's nothing special I can say about what might occur in the 21st century. I think it may be more useful to step back instead of ahead in time; there is much that history can tell us. What could we have known or predicted about today when I was born some 50 years ago. Who at that time could have predicted today's use of 'standard theory,' for example, or that within 50 years we would have discovered so much about subatomic particles. The double helix structure of DNA was discovered in 1953. Back then, it wouldn't have been possible to foresee the research being advanced these days in such fields as molecular biology or genomics.

If we were to predict the scientific advances of the 21st century, we'd have to do so based on what we currently know. However, nothing new can spring from knowledge already possessed. Looking back, new discoveries and inventions have been unpredictable surprises—products of sudden knowledge leaps. They occurred in ways totally unexpected by us. Isn't this precisely what is so marvelous about science?"

These thoughts are I believe consummately befitting a top-notch physicist.

How about each of your futures? What surprises do they hold in store? Not having the slightest idea is indeed what is so very wonderful about being a young researcher.

FY2008 JSPS Prize Awardees

Humanities and Social Sciences		
Shin Arita	Associate Professor, Graduate School of Arts and Sciences, The University of Tokyo	"Educational Structure and Social Stratification in Korea and Japan"
Asako Nakai	Associate Professor, Graduate School of Language and Society, Hitotsubashi University	"English-Language Literatures and Postcolonial Criticism"
Taiji Furusawa	Professor, Graduate School of Economics, Hitotsubashi University	"Game Theoretic Approach to International Political Economy"
Noriko Miya	Assistant Professor, Institute for Research in Humanities, Kyoto University	"Cultural Policy and Publishing Activities during the Mongol Period"
Mathematics; Physical Sciences; Chemistry; Engineering Sciences		
Kohei Itoh	Professor, Faculty of Science and Technology, Keio University	"Establishment of Semiconductor Isotope Engineering"
Kunio Inoue	Professor, Graduate School of Science, Tohoku University	"Precision Measurement of Reactor Neutrino Oscillations"
Masayuki Inoue	Professor, Graduate School of Pharmaceutical Sciences, The University of Tokyo	"Total Syntheses of Marine Polycyclic Ethers"
Masahito Ueda	Professor, Graduate School of Science, The University of Tokyo	"Theory of Ultracold Atomic Gases"
Seiji Ogo	Professor, Center for Future Chemistry, Kyushu University	"Hydrogen-Activation with Water-Soluble Metal-Aqua Complexes in Water under Ambient Conditions"
Naoki Kobayashi	Professor, Graduate School of Information Sciences, Tohoku University	"Type Theory for Software Verification"
Takao Someya	Associate Professor, Graduate School of Engineering, The University of Tokyo	"Fundamental Research on Organic Transistors and Their Applications to Large-Area Electronics"
Takeshi Tsuji	Associate Professor, Graduate School of Mathematical Sciences, The University of Tokyo	"*p*-adic Hodge Theory and Its Application"
Nobuhiro Tsuji	Professor, Graduate School of Engineering, Kyoto University	"Study on Ultrafine Grained Metallic Materials"
Masaya Notomi	Senior Research Scientist, Supervisor, NTT Basic Research Laboratories, Nippon Telegraph and Telephone Corporation	"Discovery and Applications of Novel Functions of Photonic Crystals"
Kei Hirose	Professor, Graduate School of Science and Engineering, Tokyo Institute of Technology	"Experimental Study of Earth and Planetary Materials at Ultra-High Pressure and Temperature"
Biological Sciences; Agricultural Sciences; Medical, Dental, Pharmaceutical Sciences		
Masahisa Katsuno	Designated Associate Professor, Institute for Advanced Research, Nagoya University	"Development of Pathogenesis-Based Therapy for Neurodegenerative Diseases"
Schuichi Koizumi	Professor, Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi	"Glial Regulation of the Brain Function"
Tatsuya Sawamura	Director, Department of Vascular Physiology, National Cardiovascular Center	"Elucidation of the Mechanisms of Vascular Dysfunction Leading to Cardiovascular Diseases"
Katsuhiko Shirahige	Professor, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology	"Establishment and Applications of Chromosome Analysis Technology Based on Genomic Information"
Keiko U. Torii	Associate Professor, Department of Biology, University of Washington	"Mechanisms of Stomatal Patterning and Differentiation in Plants"
Osamu Nureki	Professor, The Institute of Medical Science, The University of Tokyo	"Structural Basis for the Dynamic Mechanism of Genetic Code Translation"
Junn Yanagisawa	Professor, TARA Center, University of Tsukuba	"Study of the Molecular Mechanisms for Energy Homeostasis in Cells"
Takashi Yoshimura	Professor, Graduate School of Bioagricultural Sciences, Nagoya University	"Seasonal Clock Percepts Coming of Spring in Vertebrate—Quail as a Model Animal"
Teruhiko Wakayama	Team Leader, Center for Developmental Biology, RIKEN	"Development of Novel Biotechnologies for Animal Reproduction"

Titles and affiliations current as of 1 March 2009

FEATURE

Young Researchers at Vanguard of Science in Japan

Awardees Speak about Their Work and Aspirations

Humanities and Social Sciences

Game Theoretic Approach to International Political Economy

Game theory is a powerful tool for analyzing interactions inside a small group of economic agents. It has been applied to many economic and political problems that involve interactions among sovereign states.

One prominent feature of the modern world economy is the prevalence of free trade areas (FTAs). More than 200 of them have been registered with the World Trade Organization. Along with my coauthor, Hideo Konishi (Boston College), I am theoretically examining the properties of stable FTA networks. In this process, we view bilateral FTA ties as links (or edges) and worldwide FTA distributions as networks (or graphs). We are particularly interested in whether or not the global FTA network, which is a complete FTA network graph with every pair of countries having signed an FTA, is (so-called) pairwise stable. We've found, among other things, that the global FTA network is pairwise stable if countries are rather symmetric in their economic scale and if internationally traded goods are not very mutually substitutable. More significantly, we have successfully expanded the conventional three-country models and devised an analytical framework that can be applied to the analysis of FTAs and customs unions in a world of many countries. Our model is simple enough to simulate and powerful enough to predict stable FTA networks in a realistic multi-country model.

To design effective international institutions that facilitate international trade in goods, services, and production factors (such as capital and labor) and that help countries prosper, political factors must also be taken into account as they can significantly affect a country's attitude toward international negotiation and cooperation. Along these lines, I will continue to develop new theoretical frameworks for helping to solve international economic and political problems and for establishing effective international institutions.

Dr. Taiji Furusawa

2005-present: Professor, Graduate School of Economics, Hitotsubashi University
2003: Associate Professor, Graduate School of Economics, Hitotsubashi University
1997: Associate Professor, Faculty of Economics, Yokohama National University
1995: Associate Professor, Faculty of Economics, Fukushima University
1994: Lecturer, Department of Economics, Brandeis University
1994: Received Ph.D. from University of Wisconsin-Madison
1987: Graduated from Hitotsubashi University

Cultural Policy and Publishing Activities during the Mongol Period

The Mongol Period, started by Genghis Khan's appearance, has been termed "a dark age," one which exhaustively destroyed Chinese traditional culture and values. The fact of the matter is, however, to the contrary: The Mongolian government attached much importance to the compilation and publication of books that promoted the preservation and diffusion of the classics and new knowledge. It also built schools and research laboratories and worked to nurture capable people. The government invested vast amounts of public funds into these pursuits. Incumbent bureaucrats participated actively in the publication of Yuan drama scripts, novels written in the vernacular, and illustrated books.

Under the Mongolian government, which ruled a phenomenally vast territory, the exchange of people, commodities and information developed on a massive scale under the patronage and initiative of the Imperial Court. As a result, the science, art and technology of each place within the territory was harmonized with wisdom transmitted from a spectrum of ages and countries. This harmony provided the stimulus for epoch-making progress.

The Korean and Japanese societies and cultures were greatly influenced by and are indebted to the Mongolian reign. Teaching materials for the Chinese classics used in present-day Japanese high schools, calendars, mathematical books that assisted the evolution of *Wasan* (Japanese mathematics) in the Edo Period, and illustrated encyclopedias frequently cited and quoted in various disciplines were all products of the Mongol Period. From the Kamakura through Muromachi Periods, Buddhist priests, diplomats and merchants brought these documents back with them to Japan, while mainly aristocrats and priests in Kyoto translated and studied them.

Old temples, shrines and libraries of former aristocrats in various districts of Japan preserve many important documents that have been scattered or lost in China. Search and scrutiny of these documents allows various new facts to be ascertained.

In Japan, Korea, China, and Chinese Taipei, I have gathered and investigated documents and books written in the 13th through 15th century. For the purpose of elucidating political and cultural exchange on the Eurasian continent, I intend in the future to investigate and analyze Chinese information inscribed in Persian documents during the same period, now contained in European and the Middle Eastern libraries. I will carry out these two components of my research simultaneously.

Dr. Noriko Miya

2001-present: Assistant Professor, Institute for Research in Humanities, Kyoto University
2002: Received Ph.D. from Kyoto University
1999: JSPS Postdoctoral Research Fellow, Kyoto University
1994: Graduated from Kyoto University

p-adic Hodge Theory

Since I was a graduate student, I have been working mainly on *p*-adic Hodge theory, which is one subject in arithmetic geometry. The symbol *p* denotes a prime number and the word "*p*-adic" originates from *p*-adic numbers, which are expressed as infinite series $\sum_{n \geq -N} a_n p^n$ with integers a_n between 0 and $p - 1$. It is one of the most fundamental notions in number theory. Roughly speaking, arithmetic geometry connotes all research in number theory that probes or uses the geometry of algebraic varieties, which are locally defined as the "solution space" of polynomial equations with coefficients in rational numbers or *p*-adic numbers (such as $y^2 = x^3 + 3$).

We often study algebraic varieties by extracting linear data called cohomology groups, among which is *p*-adic étale cohomology, a finite dimensional vector space over the field of *p*-adic numbers $\mathbf{Q}_p$. It gives us deep arithmetic information through its additional structure: the action of the absolute Galois group of the field of rational numbers. Based on preceding work by many mathematicians, especially Fontaine, Messing, Bloch, Kato, Hyodo and Faltings, I succeeded in devising a proof for a fundamental conjecture in *p*-adic Hodge theory: "semi-stable conjecture." This result is of significant help in understanding the "ramification at *p*" of the above-mentioned action of the Galois group. It already has found some interesting applications in number theory. For example, my result was used in Takeshi Saito's work, which was, in turn, used by Khare and Wintenberger to solve Serre's conjecture on modularity.

Roughly speaking, *p*-adic Hodge theory is advancing in two directions. One is the deeper study of *p*-adic representations (=$\mathbf{Q}_p$-vector spaces with an action of the absolute Galois group of $\mathbf{Q}_p$ or its extension) with an eye to its applications to modular forms. The other is the study of variations of *p*-adic representations: $\mathbf{Q}_p$-vectors spaces with an action of the fundamental group of an algebraic variety. Recently, I have been working on the latter and its applications, and further plan to develop theories applicable to singularities of variations and to algebraic varieties with bad reductions.

Dr. Takeshi Tsuji

2000-present: Associate Professor, Graduate School of Mathematical Sciences, The University of Tokyo

1993: Research Associate, Research Institute for Mathematical Sciences, Kyoto University

1993: Received Ph.D. from The University of Tokyo

1990: Graduated from The University of Tokyo

Control of Light by Photonic Crystals

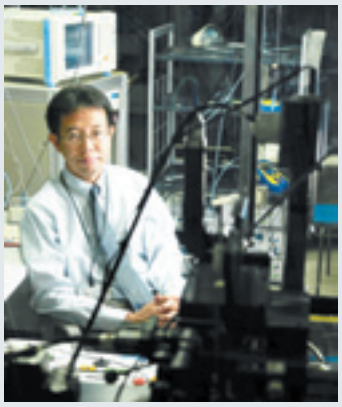
My current research themes are primarily concerned with so-called "photonic crystals." Let me explain: Today's electronics fully enjoys a wide variety of electronic properties contained in their component materials. Most of these properties come from the periodic potential of the crystal lattice, upon which the atoms of the crystal are arranged. In contrast, there is only a limited variety of optical properties as the lattice period of these materials is far shorter than a light wavelength. If a material could be made with the periodic arrangement of its refractive index comparable in periodicity to the wavelength, it would exhibit various novel optical properties. Actually, a photonic crystal is just such a material, artificially made using state-of-the-art nano-fabrication technology.

What can photonic crystals do? Appropriately designed photonic crystals behave strangely beyond our conventional understanding of optics. As an example, I have demonstrated that a certain type of photonic crystals behaves as if it possesses a *negative* refractive index, although this index is normally positive. As conventional optics assume a positive index, negative-index materials yield various surprising phenomena. For example, their simple flat surface can function as a lens.

What else? Photonic crystals can realize *slow* light. We demonstrated a group velocity of light slowed down to c/90 (c: light velocity in vacuum), which was the first manifestation of slow light in dielectric structures. Recently, we have further reduced the velocity to c/50000 (6 km/s). Slow light is now a hot topic in the optics field, as it is expected to enable all-optical buffer memories.

There are more things photonic crystals can do such as ultrastrong light confinement in a small volume, which can enhance light-matter interaction and dramatically reduce energy consumption. In addition, they are ideally suited as platforms for densely-integrated photonic circuits.

Photonics is currently an enabling technology in the ICT domain, especially for high-speed broad-band services, such as fiber-to-the-home transmission. Electronics, however, continue to play the leading role in information processing. This is primarily because electrons are much easier to manipulate than photons. I believe that photonic crystals may change this paradigm, and dream of the day when a tiny photonic-crystal integrated chip will handle various complicated functions.



Dr. Masaya Notomi

2004-present: Group Leader, Senior Research Scientist, Supervisor, NTT Basic Research Laboratories, Nippon Telegraph and Telephone Corporation (NTT)

2001-present: Distinguished Technical Member, NTT Basic Research Laboratories, NTT

1999: Senior Research Scientist, NTT Basic Research Laboratories, NTT

1997: Received Ph.D. from The University of Tokyo

1988: Joined NTT Optoelectronics Laboratories, NTT

1986: Graduated from The University of Tokyo

Biological Sciences; Agricultural Sciences; Medical, Dental, Pharmaceutical Sciences

Regulation of Brain Functions by Glia

Glia, Greek for "glue," was discovered by Rudolph Virchow, a German anatomist, in the mid-19th century. The term reflects the original view that glial cells play only structural or supportive roles for neurons. Thus, almost all brain scientists were more interested in neurons than this "glue." To know neurons was to understand the brain. However, glial cells, especially astrocytes, are much more than just glue; they are active, not quiescent, as can now be seen by means of fluorescent Ca^{2+} imaging. They can receive inputs, assimilate information, and send instructive chemical signals to both neurons and other neighboring cells by so-called "gliotransmitters." In a gliotransmitter, adenosine 5'-triphosphate (ATP) plays a central role. ATP is well-known as an energy currency produced by mitochondria within cells. When released, however, it acts on its specific "P2 receptors" and can mediate glia-to-neuron communication. Such neuron-to-glia coupling can be seen as a true character of brain function. I would say that to know neurons is not enough to understand the brain. We should learn much about glia.

I am especially interested in the involvement of glia in brain pathology. When traumatic brain injuries or degenerative neuronal diseases occur, both astrocytes and microglia dramatically change in morphological and functional character. In fact, prognosis after brain strokes is greatly affected by microglial dysfunction, and neuropathic pain is triggered by activation of spinal microglia. I think that many brain diseases start with glial pathology, and therefore, glia could be a prime target for therapy. I would also say that to know glia is to understand brain diseases.

I will keep investigating glial functions in relation to brain diseases, with the ultimate aim of pioneering a new field of "Neurogliology."

Dr. Schuichi Koizumi

2007-present: Professor, Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi
2002: Senior Scientist, National Institute of Health Sciences
1995: Research Scientist, National Institute of Health Sciences
1992: Postdoctoral Fellow, Japan Health Sciences Foundation
1992: Received Ph.D. from Kyushu University
1987: Graduated from Kyushu University

New Director Appointed for Research Center for Science Systems

From 1 January, Dr. Makoto Kobayashi assumed the directorship of JSPS's Research Center for Science Systems. He holds this new post concurrently with his position as executive director at JSPS (held since 2007) and honorary professor emeritus at the High Energy Accelerator Research Organization (KEK).

As a researcher, Dr. Kobayashi specializes in the field of particle theory. From 1979 to 2006, he held successive posts at KEK, where he became director of its Institute of Particle and Nuclear Studies in April 2003 and trustee in April 2004. Last year, Dr. Kobayashi received the Nobel Prize for his discovery of the origin of broken symmetry.

As the director of the Research Center for Science Systems, Dr. Kobayashi carries out a wide range of responsibilities, which include the selection and performance evaluation of researchers who serve as application examiners under JSPS's programs, most notably its very large Grants-in-Aid for Scientific Research and Research Fellowships for Young Scientists programs, while providing advice on how to enhance JSPS programs based on leading scientific imperatives and trends.

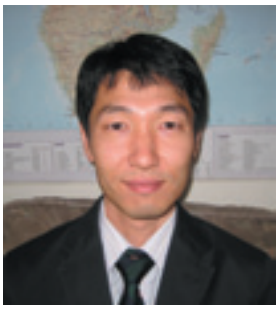
In FY 2009, the Center is staffed by 116 researchers, headed by the director and three deputy directors: Dr. Michio Muramatsu, Dr. Motoya Katsuki, and Dr. Toshio Kuroki. Dr. Shiro Ishii serves as the Center's senior advisor. Under them are 18 senior program officers and 93 program officers.

Dr. Makoto Kobayashi

— Research Center for Science Systems

Message from New Office Director

By Mr. Osuke Komazawa, JSPS Nairobi Research Station



What comes to mind when you hear the word "Africa," particularly sub-Saharan Africa that is the focus of this message? You may imagine wild animals such as lions, elephants, giraffes, gorillas or the beautiful scenery of the savanna, tropical rain forests, high mountains, even glaciers. You might also envision extreme poverty or people living under miserable conditions. Of course, such stereotypes represent some actual aspects of Africa. Unfortunately, very few people associate Africa with science. I, however, see Africa as the "home" of science, as it is the place from whence all human beings ascended. Research conducted in Africa can be focused on fundamental human issues, such as where we came from and where as a race we are going; how to understand our place in the world and to survive its hardships. The so-called developed countries of the world may be veering astray in addressing such ultimate goals of science.

The Nairobi Research Station was established in 1965, making it the oldest of JSPS's overseas research stations. The main task of the Station has been to support fieldwork conducted by Japanese scientists mainly in East Africa. Since the time my predecessor, Mr. Itsuhiro Hazama, arrived in this post in 2005, the activities of JSPS Nairobi Research Station have seen tremendous expansion. This despite the fact that he was the only Japanese posted at the Nairobi Station. Under his direction, the Station started to sponsor and hold symposia, while succeeding in co-establishing the Eastern Africa (Kenya) JSPS Alumni Association. His achievements have been so remarkable as to defy improvement; I will, nevertheless, do my best to maintain and strengthen the network of scientists forged in East Africa by Mr. Hazama.

There are two aspects to my background that I believe give me a rather unique profile as a director of a JSPS overseas research station. One is that I have been a practicing physician. For five years, I've worked in public hospitals in Japan as an ear-nose-throat doctor. The JSPS Nairobi Research Station has established a tradition in human research as its directors have been mainly primatologists, paleo-anthropologists, cultural and social anthropologists, or linguists. Medical science is also a field of this genre. I am very glad to be qualified in this way as a new director who inherits and must develop the tradition of human research in Nairobi.

Another peculiarity I have is being a member of Japan's "lost generation," a term used by Japanese newspapers to refer to people born between the mid-1970s and early 1980s. When we were teenagers or in our early twenties, Japan had already matured as an affluent country making it difficult for us to secure permanent employment. So, many of us became temporary or day-wage workers, setting us in stark contrast to previous generations. We are often criticized as lacking a competitive spirit or sufficient eagerness to promote ourselves. Being a member of this "lost generation" gives us, however, some special traits. I believe, for example, that we possess more originality and creativity along with freer ways of thinking gained from having grown up in the less-structured, what critics call "aimless," era following Japan's period of rapid economic growth. As creative work takes longer to bring to fruition, I'd like to ask you to understand and be patient with my generation as we go about moving things forward.

Back to Africa: It is a very attractive place for scientific pursuit. If you haven't been here, you should consider coming to Africa to engage in creative pursuits aimed at science's ultimate goals. Let's work together. The JSPS Nairobi Research Station is always ready to entertain requests from scientists wishing to do research in Africa. *Karibu Kenya na Afrika!* (Welcome to Kenya and Africa.)

Japan-UK Higher Education Symposium Held in London

On 11-13 February, the first Japan-UK Higher Education Symposium was held, cosponsored by the Japan Society for the Promotion of Science and the British Council. Venued in London, the event celebrated the 150th anniversary of Anglo-Japanese exchange. Aimed at promoting ever-closer partnership between the UK and Japan, the symposium was attended by presidents and chancellors of 16 Japanese and 18 British universities. Including representatives of science-promotion agencies from both countries, altogether about 90 people participated.

The symposium focused on three themes: Contribution of higher educational institutions (HEIs) to regional development, developing appropriate curricula for the workplace of the 21st century, and internationalisation of research. Each was examined and discussed in the working sessions. In the plenary session, Dr. Tsutomu Kimura, president, National Institution for Academic Degrees and University

Evaluation (NIAD-UE), delivered a keynote address on the theme "Japanese Challenges for Higher Education Reform in Recent Years." In it, he spoke about how Japan is emulating the British model in carrying out its process of university reform and introduced the Japanese government's 300,000 International Students Plan and other initiatives to open the country more widely to the world. On the British side, Prof. David Eastwood, chief executive, Higher Education Funding Council for England (HEFCE), spoke on the subject "Higher Education's Contribution to Knowledge Economy," introducing related programs initiated by the UK government and budgetary measures to support them.

In response to the various issues addressed in the sessions, the participants engaged in active discussions that shined clearer light on points of overlap and difference between the higher education systems of the two countries. The representatives of the Japanese and British universities decided to continue this dialogue toward the implementation of tangible forms on inter-collegiate exchange.


Dr. Kimura giving keynote speech

— Research Cooperation Division I/JSPS London Office

JSPS Holds Briefing for the Science & Technology Diplomatic Circle

On 24 February, JSPS held a briefing for members of the Science & Technology Diplomatic Circle (S&TDC) at Hotel Monterey Hanzomon in Tokyo. Convened at S&TDC's request, this briefing on JSPS's programs was attended by 27 people including science and technology counselors and first secretaries of various countries' embassies in Tokyo. On the JSPS side, the briefing was attended by JSPS executive director Mr. Naoki Murata, International Program Department director Ms. Mami Oyama, and all division heads of the International Program Department.

In her presentation, Ms. Oyama described JSPS's organization, budget, Grants-in-Aid program, international exchange programs, and support programs for advancing university reform and fostering young researchers. The attendees showed keen interest in the briefing and asked volleys of questions in the following Q&A session.


Ms. Oyama giving briefing to participants

In a continuing exchange of views, the S&T staffs of the embassies talked with each other and JSPS executives about expanded networking and information exchange.

— Research Cooperation Division I

ESF-JSPS Frontier Science Conference Series for Young Researchers Held in Italy

On 27 February–4 March, an ESF-JSPS Frontier Science Conference Series for Young Researchers was held in the suburbs of Naples, Italy. These conferences are held once a year at alternating venues between Japan and Europe based on a proposal in the report issued by the Japan-EU Workshop, jointly convened in 2001 by JSPS and EU institutions in Japan for the purpose of invigorating scientific collaboration between Japan and European countries. Cosponsored by JSPS and the European Science Foundation (ESF), the conferences lodge the young participants together in a seminar format designed to probe cutting-edge scientific topics.

The theme of this year's conference was "Social Cognitive Neuroscience." Twenty-two Japanese and European specialists delivered lectures to 62 young researchers selected via open recruitment. On the Japanese side, the Co-chair was Prof. Shun-ichi Amari, RIKEN Brain Science Institute, with Prof. Atsushi Iriki, RIKEN Brain Science Institute; Prof. Shigeru Watanabe, Keio University; Prof. Tetsuro Matsuzawa, Kyoto University; and Prof. Toshikazu Hasegawa, the University of Tokyo, serving on the

Organizing Committee.

The program centerpieced the following five session themes: Mirror Neuron System and Evolution of Social Intelligence, Development of Human Social Cognition, Problem Solving and Decision Making, Communication and Language, and Theory of Social Neuroscience. In addition to lectures, each session featured short talks by the participants, who used the opportunity along with poster sessions to introduce and exchange views on their respective research activities. The participants also enjoyed informal conversation during an excursion, mealtimes and breaks. The networks formed between the participants and lecturers through these interactions promise to expand collaboration in the field of social cognitive neuroscience.

— Research Cooperation Division Ⅱ

First General Meeting Held of Bangladesh-JSPS Alumni Association

On 21 March, the Bangladesh-JSPS Alumni Association held its first annual general meeting at Radisson Water Garden Hotel Dhaka. Past Bangladeshi participants in JSPS's postdoctoral and invitational fellowship programs had for some time shown a strong desire to form a researcher network. As there is no JSPS liaison office in Bangladesh, the Embassy of Japan offered vigorous cooperation in helping to establish the alumni association and convening this, its inaugural general meeting. Among the ten countries with JSPS alumni associations, this makes only the third without a JSPS liaison office, the other two being India and Korea.

Bangladesh ranks among the ten top countries in the number of researchers coming to Japan each year under JSPS's postdoctoral fellowship program.

The general meeting was very successful, attended as it was by some 70 alumni members and Bangladeshi university faculty and staff, among other interested persons. The meeting began with introductory remarks by

JSPS executive director Mr. Naoki Murata, followed by Alumni Association vice-president Prof. Dr. Md. Abul Hashem, who read a message on behalf of Association president Prof. Naiyyum Choudhury, who was unfortunately unable to attend the meeting. Then, Mr. Masayuki Inoue, Ambassador of Japan to Bangladesh; Prof. A.A.M.S. Arefin Siddique, vice chancellor, University of Dhaka; and Prof. Dr. Alauddin Ahmed, adviser in charge of Education, Social Development & Political Affairs to the Prime Minister of Bangladesh, extended hearty congratulatory remarks from their respective vantage points on the establishment of the alumni association.

A scientific colloquium was held after the general meeting. Two researchers delivered lectures at it. One was Prof. Shigenao Kawai, Faculty of Agriculture, Iwate University, who had hosted some of the Bangladeshi alumni members during their fellowship tenures in Japan. In his lecture, he spoke about recent advances in research in biological sciences and introduced Iwate University along with his own research activities. The other lecturer was Alumni Association general secretary Dr. Md. Khabir Uddin, associate professor, Department of Environmental Sciences, Jahangirnagar University, who spoke on the topic "Effect of Textile Wastewater on the Environment, and Some Indigenous Remediation Approaches." The two lectures spurred a vigorous exchange of views between the attending researchers.

In the months and years ahead, the Bangladeshi researchers belonging to the new alumni association are expected to forge close working networks with their Japanese colleagues, ones that will spawn wide and long-enduring exchange between the two countries.

— Overseas Fellowship Division

Symposium on Advanced Nanoscale Materials Held in the US

On 6-7 March, the US JSPS Fellows Alumni Association co-sponsored a symposium with the JSPS Washington Office, Michigan Molecular Institute, and Argonne National Laboratory. Entitled "Multifunctional Nanoscale Materials for the 21st Century," it was held at Argonne National Laboratory in Argonne, Illinois.

The symposium was organized by four members of the alumni association—Dr. Abhijit Sarkar, Michigan Molecular Institute; Dr. Elena Rozhkova, Argonne National Laboratory; Prof. Arup Neogi, University of North Texas; and Prof. Longjian Liu, Drexel University—and Dr. Hirotaka Sugawara, who is the director of the JSPS Washington Office.

The symposium was addressed by 13 researchers from Japan and 14 from the US, who spoke on various topics on the cutting edge of research in the subject field. Over 100 people attended the symposium, with the audience comprising alumni association members, researchers from Argonne National Laboratory and Michigan Molecular Insti-

tute, and interest members of the public.

The event opened with welcoming remarks from Dr. Sugawara, who was followed by Ms. Mami Oyama, director of JSPS's International Program Department. On the first day, the keynote speakers in the morning sessions were Dr. Eric D. Isaacs, director of Argonne National Laboratory, and Dr. Stephen K. Streiffer, director of the Center for Nanoscale Materials, Argonne National Laboratory. Dr. Isaacs spoke about "Nanomaterials for Energy" and Dr. Streiffer about "X-Ray Methods for Studying Nanomaterials."

The afternoon sessions were chaired by Prof. Motoichi Ohtsu, the University of Tokyo, and Prof. Haim Grebel, New Jersey Institute of Technology. The sessions addressed the subjects of "nanophotonics" and nanoscale materials for biology, respectively. In between them, a

poster session and laboratory tour were held. More than 20 posters were prepared by young researchers and doctoral students from Japan and the US.

On the second day, the plenary speaker was Prof. Ohtsu, whose talk was titled "Nanophotonics: Exchanging the Dressed Photons." A full day of talks followed Prof. Ohtsu's interesting and engaging presentation. Three more sessions followed, with Prof. Kazushi Kinbara, Tohoku University, Prof. Petar R. Dvornic, Michigan Molecular Institute, and Dr. Takashi Yatsui, the University of Tokyo, each chairing one of them.

Going back to the first day, a reception was held in the evening. Opening remarks were delivered by Mr. Yoshiharu Kato, deputy consul general of Consulate General of Japan at Chicago. It offered the participants a good opportunity to discuss the day's topics in greater detail while making new contacts that could spark the beginning of future collaborations.

An annual general assembly of the US JSPS Fellows Alumni Association was held concurrently with the symposium.

For further information on the symposium, please visit the following website: http://www.nanoscale21.com/.

— JSPS Washington Office

A Joint Effort for Combining Space Science with Archaeology

"Disturb and be cursed!"

Mummies of the Pharaohs may be crying indignantly from their subterranean tombs of eternal repose at being disturbed by what has been state-of-the-art technology. After dying, the bodies of these dynastic rulers were processed and placed in caskets in such a manner that they might live on forever in the necropolis. As time lapsed, sand storms covered these tombs sinking them into oblivion, except for those found and routed by grave diggers or foreign excavators.

To move forward in exploring this ancient past in a technologically friendly manner, an Egypt-Japan Joint Symposium on Remote Sensing Applications in Archaeology was convened on 14-15 February at the Supreme Council of Antiquities in Cairo. Along with Egypt's Ministry of Higher Education and Scientific Research, it was sponsored by JSPS's Cairo Research Station.

From the Japanese side, Prof. Sakuji Yoshimura, president, Cyber University, delivered a lecture with his colleague Prof. So Hasegawa, Waseda University's Institute of Egyptology, on achievements in detecting sand-hidden ruins of several thousand years old using satellites from high above the earth.

Prof. Yoshimura is a frontrunner in Egyptology, having not only advanced milestone research in this field but also making archaeology very popular among dilettantes in Japan. The flow of Japanese tourists to Egypt is influenced to a certain degree by his books or lectures. Also attending the event were Prof. Dr. Haruhisa Shimoda, director of Tokai University's Space Information Center, and Dr. Masahiro Etaya, chief of the Image Processing Section, Tokai University's Research & Information Center. They are both experts in space-based genre of highly sophisticated sensing and imagining techniques.

On the Egyptian side were several specialists from the National Authority for Remote Sensing and Space Sciences (NARSS), who reported on their respective research results. It is no easy

task to spot buried tombs long forgotten for several thousand years. NARSS scientists are endeavoring to detect these underground sites of priceless historical and cultural heritage by analyzing satellite-transmitted data.

This symposium brought together scientists from Egypt and Japan in an exchange of views on the newly created scientific domain of "space archaeology." This kind of celestial technology can also be applied for terrestrial purposes such as exploring for natural resources, including gas and oil. In these ways, the Egypt-Japan collaboration in remote sensing is proving very fruitful, contributing as it does to both past and future exploration.

— JSPS Cairo Research Station

JSPS-NRCT Summer School Held on Biomass Energy in Asia

On 21-23 February, the JSPS Bangkok Office co-organized an educational seminar with National Research Council of Thailand (NRCT) and Graduate School of Agricultural and Life Sciences, the University of Tokyo. Titled "JSPS-NRCT Summer School: Biomass Energy in Asia," it was held in Bangkok.

Burgeoning global imperatives, including energy security and greenhouse warming countermeasures, have spurred an increased use of biomass energy. Japan's collaboration with Southeast Asian countries, blessed with an abundance of biomass resources, will be vital for both increasing the energy supply and mitigating global warming. Concomitantly, there is an urgent need to foster researchers capable of carrying out both international and interdisciplinary research on biomass energy utilization.

In this seminar, young Thai and Japanese researchers (mainly postdocs and doctoral students) were given the opportunity to report on their own research activities and discuss topics of mutual interest with seniors and peers from each other's countries. In this process, they expanded their multifaceted knowledge of the subject, while embarking upon network building. A total of nine Thai and Japanese researchers delivered lectures to a "class" of 24 young participants.

On the first two days of seminar, the following three sessions were held: Biomass Energy Policy and Issues in Japan and Thailand; Transformation of Biomass into Energy; and Actions toward Sustainable Biomass Energy. In them, the participants learned about the current state of biomass energy usage, research on related technologies, and projects being carried forward in the two countries. Addressing the subject from a wide range of perspectives gave the participants an overall view of biomass energy and its applications. Each session began with lectures by senior Thai and Japanese researchers, followed by presentations from and discussions among the participants. At a night session, Prof. Yasuo Igarashi, the University of Tokyo, moderated a wrap-up discussion in which the participants were asked to rethink the thrust of their various activities, thus broadening their perspectives and horizons.

The third day featured a study tour to a biomass energy power plant in Phetchaboon Province. The plant generates electricity by gasifying waste from local furniture manufacture and agriculture. This privately operated plant sells the energy it produces to the provincial power company, thus providing a unique experiment for the participants to observe in the effective use of local resources.

— JSPS Bangkok Office

Todai Forum Held in the UK

For a four-day period from 27 through 30 April, the Todai Forum was held at multiple venues in the UK. For this forum, the University of Tokyo (Todai) dispatched some 60 students and faculty to the UK. As one of the sponsoring organizations, the JSPS London Office provided full support for the forum from its preparation through successful conclusion.

Todai holds these fora in collaboration with universities in the host country. They serve to widely introduce cutting-edge research being advanced at the University of Tokyo. This forum in the UK was the seventh in the series, the first having been held at the Massachusetts Institute of Technology (MIT).

This Todai Forum featured three timely themes: Human Security and Business, Harmonization of Nuclear Utilization with Society, and Disability and Economy. Components of the forum were held at City University London, Imperial College London, University of Cambridge, and Manchester Metropolitan University. Each venue overflowed with attendees interested in the latest research being presented and discussed. Under each of the themes, a simultaneous student forum was also held. This wide intellectual exchange, trans-generational as well as trans-national, is one salient characteristic of the Todai Forum.

For the opening ceremony on the first day, a reception for all four day's participants was held at the Royal Society. With Prof. Akihiko Tanaka, managing director, executive vice president, the University of Tokyo, presiding, the reception started with opening remarks from Prof. Junichi Hamada, president, the University of Tokyo. Then, Mr. Wataru Nishigahiro, Minister Plenipotentiary, Embassy of Japan in the UK, delivered a congratulatory message, followed by JSPS London Office director Prof. Yuko Furukawa, who said a few words before proposing a toast. At the reception, conversation abounded across lines of nationality, research field, and generation.

Prof. Hamada delivering remarks

At each of the forum venues, the London Office set up a booth for providing information on JSPS's fellowship and other programs. Through face-to-face exchanges of view with British students and researchers, the staff was able to relay them information that met their individual interests and needs.

— JSPS London Office

Second China-Japan Science Forum Held on 2008 Wenchuan Earthquake

The Second China-Japan Science Forum, titled "2008 Wenchuan Earthquake and Natural Disaster Mitigation," was held on 9-10 March at the Lake View Hotel in Peking University Science Park.

On 12 May of last year, a magnitude 8.0 mega-earthquake epicentered in Wenchuan County, Sichuan Province, China, took the precious lives of 87 thousand people and uprooted the region's living environment by destroying its societal infrastructure. Japan is no stranger to destructive earthquakes having experienced very many of them, most notably the Great Hanshin-Awaji Earthquake. It was out of a desire for Japan to combine forces with China in post-disaster reconstruction in the wake of the Wenchuan Earthquake and in investigating ways to mitigate injury and damage from future natural disasters that JSPS's Beijing Office planned the holding of this forum.

It was cosponsored by JSPS and the China Earthquake Administration (CEA), with support from the National Natural Science Foundation of China. For the forum, an organizing committee was established with cochairs on the Japanese and Chinese sides. Prof. Masanori Hamada, Faculty of Science and Engineering, Waseda University, was the Japanese cochair, while Prof. Mengtan Gao, deputy director, Institute of Geophysics, CEA, chaired the Chinese side. Preparations were made by many cooperating institutions and researchers working together from both sides.

The forum comprised an opening ceremony, keynote speeches, presentation sessions, a poster session, and a final summary session. As one of the keynote addresses, Mr. Hiroshi Masuko, director, Earthquake and Disaster-Reduction Research Division, Ministry of Education, Culture, Sports, Science and Technology, and Mr. Toshitami Kaihara, former governor of Hyogo Prefecture (currently, president, Hyogo Earthquake Memorial 21st Century Research Institute), introduced in some detail Japan's research system for disaster prevention and mitigation, which was largely strengthened after the Great Hanshin-Awaji Earthquake. After the speeches, sessions were held on the following three themes: Seismological and Geological Aspects; Effects on Infrastructures, Buildings and Slopes, and Reconstructions; and Long-term Recovery of Society and Community. These sessions were convened in parallel at three locations. In the final summary session, reports were delivered by each session moderator and a summary of the overall forum results given by the two chairmen.

Over the course of the forum, a total of 55 oral presentations were given, along with 29 poster presentations and five corporate displays. Altogether, the event enjoyed the participation of about 150 researchers and other engaged persons, among whom nearly 60 came from Japan. After the forum, 18 of the Japanese participants repaired to Chengdu to conduct a three-day field investigation, led by researchers from the Earthquake Administration of Sichuan Province, of the state of post-earthquake reconstruction in the area.

Besides being very successful in carrying out a wide-ranging bilateral interchange on natural disaster mitigation, the forum also laid groundwork for advancing highly anticipated Sino-Japanese collaboration in this vital domain.

— JSPS Beijing Office

Colloquium on Sun & Earth Connections Held in Stockholm

On 10-11 March, the JSPS Stockholm Office held a colloquium on the research theme "Sun & Earth Connections." It was convened in the auditorium "Beijersalen" of the Royal Swedish Academy of Sciences (KVA) in Stockholm, Sweden. Cosponsoring the event were KVA and the Swedish Institute of Space Physics (IRF). Some 60 Japanese and Swedish researchers and students participated in it.

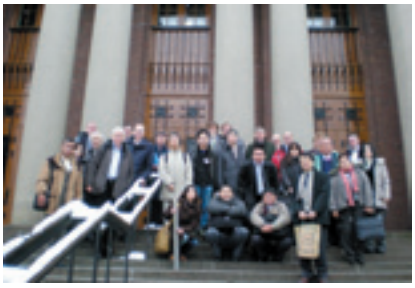
Making milestone advances in this field requires international collaboration, as it would be difficult for any one country to take on such a complex, large-scale universe observation program by itself. That, in turn, mandates building multi-national networks. Within the global scientific community, Japan plays a leading role in such fields as X-ray astronomy, space plasma physics and solar physics, whereas Sweden plays a pivotal role in aurora and stratospheric ozone observation and research conducted at IRF in Kiruna. It is also a leader in providing satellite management and other space-development services. This colloquium worked to build networks among several research institutes and universities in the two countries with an eye to promoting new depths and dimensions of scientific investigation in related fields.

The meeting was opened by KVA per-

manent secretary Prof. Gunnar Öquist, who described the history of the Royal Swedish Academy of Sciences, including its establishment of the Kiruna Geophysical Observatory, IRF's predecessor, in 1957, while going on to state the expectations KVA has for research cooperation with Japan. Then, JSPS Stockholm Office director Prof. Hiroshi Sano spoke about the importance of the subject research fields from the viewpoint of tackling global issues such as climate change. In his talk, Prof. Anders Karlsson, science & technology counsellor, Embassy of Sweden in Japan, touched upon topics relevant to the recent state of space science in Sweden and Japan; Swedish astronaut Dr. Christer Fuglesang's experience in Japan; and the launch of the *IBUKI* greenhouse-gases observing satellite (GOSAT) from Tane-ga-shima in January 2009. He also introduced an agreement for future cooperation concluded between the Japan Aerospace Exploration Agency (JAXA) and the Swedish National Space Board (SNSB).

On the first day, presentations were delivered by Japanese and Swedish researchers on a range of state-of-the-art topics, including "The Sun as Driver of Heliospheric Activities—New Views from the Results of Solar-Physics Satellite *HINODE*," "The Plasma Environment of Giant Planets," "Solar Wind Interaction with Inner, Earth-like, Planets," "Auroral Processes in the Solar System," and "Explosive Events in Space." The day finished up with a poster session by the participating postdoctoral researchers and doctoral students.

On the second day, more presentations were given on such topics as "Japanese Plan for Solar System Explorations," "MHD Simulation of Interaction between Jovian and Kronian Magnetospheres and Solar Wind," "Plasma Surface Interaction in Space," and "Laboratory Plasma of Relevance to Space." They were followed by a discussion to wrap up the two day's proceedings. In it, IRF Prof. Rickard Lundin asked the



participants to propose fields conducive to future collaboration between Sweden and Japan. That spurred a spirited exchange of views on mid- to long-term research possibilities from a diverse range of perspectives.

It was decided to post the colloquium's presentation abstracts and a compilation of its discussion results on the Stockholm Office's website for open access and viewing. The curtain closed on the event amidst high expectation that the colloquium constituted a first big step in an unfolding path of exchange between the two countries' participants and their institutions.

— JSPS Stockholm Office

Fifth Japan-Germany Colloquium Held on "Evolutionary Genomics"

On 8-11 March, the JSPS Bonn Office held a colloquium on the theme "Evolutionary Genomics," venued in Bad Honnef on the outskirt of Bonn.

The colloquium organizers were Prof. Dr. William Martin, Institute of Botany III, University of Duesseldorf, and Prof. Dr. Naruya Saitou, National Institute of Genetics. They selected the participants and planned the sessions. Twenty-five speakers were selected mainly from the cadre of young participants, including six female researchers, from Germany and Japan. The Japanese participants comprised research associates and postdoctoral researchers, with the exception of the organizer. The following seven sessions were held over the two-day event: (1) All things start small…, (2)…and things can get tangled, (3) Duplications and development, (4) Getting things sorted into their proper places, (5) The dynamic chromosome…, (6)…and the even more

dynamic chromosome…, and (7) Evolution at work in the wild.

In all the sessions, very active Q&A periods exceeded the time parameters. They gave the participants the chance to ask the speakers directly about the intricacies of their research, creating a give-and-take that was both stimulating and inspirational. Many larger academic conferences, attended by mostly male researchers, have an insular feeling about them. In contrast, the Q&A periods in this smaller-scale colloquium allowed an open discussion enriched by inputs from the female participants. Observing this setting, the Bonn Office staff gained a renewed perception that good old face-to-face exchange can still outrival the new communication modes available over the Internet.

On the last day, Prof. Dr. Martin was kind enough to lead the group of Japanese participants on a tour of his university's Institute of Botany III. The experience was very much enjoyed as it offered the young participants a glimpse of an overseas research environment.

During breaks and meal times, the staff observed Japanese and German researchers talking over plans to start new joint initiatives. It is our hope that holding this colloquium has given context and impetus for advancing new collaborative projects in and around the field of evolutionary genomics.

— JSPS Bonn Office

Science Dialogue

The following fellows participated in JSPS's Science Dialogue Program during the period from February through March 2009. For details about the program, please see its webpage: http://www.jsps.go.jp/english/e-plaza/e-sdialogue/

— Overseas Fellowship Division

Aomori Prefectural Hachinohe-kita High School

Date: 19 March
Dr. Francisco J. Jimenez-Espejo (Spain)
Host institution: Japan Agency for Marine-Earth Science and Technology
Title: "Climate Change and Marine Sciences"

Chiba University Faculty of Education Attached Junior High School

Date: 9 February
Dr. Farid Kendoul (Algeria)
Host institution: Chiba University
Title: "Aerial Robotics and Its Applications in Our Daily Life"

Ehime Prefectural Matsuyama Chuo High School

Date: 13 March
Dr. Darren C. Peets (Canada)
Host institution: Kyoto University
Title: "Introduction to Superconductivity"

Fukui Prefectural Fujishima Senior High School

Date: 24-25 February
Ms. Ramona T. Bajema (USA)
Host institution: Waseda University
Title: "Japanese Artists in the United States, 1840-1942"

Ishikawa Prefectural Kanazawa Izumigaoka High School

Date: 16 March
Dr. Guy D. Williams (Australia)
Host institution: Hokkaido University
Title: "Antarctic Bottom Water"

Kumamoto Prefectural Daini High School

Date: 20 February
Dr. Aqil Muhammad (Indonesia)
Host institution: Tokyo University of Agriculture
Title: "Development of Environmental Restoration Measures of Degraded River Basin in Tropical Countries"

Nara Prefectural Nara High School

Date: 16 February
Dr. Michael S. Chae (Canada)
Host institution: Saitama University
Title: "The Mechanisms of Ageing: Lessons from a Fungus"

Niigata Prefectural Niigata Minami High School

Date: 4 February
Dr. Yana Supriatna (Indonesia)
Host institution: Gunma University
Title: "A Brief Study from My Country on Unity in Diversity, and Learn from My Research about Gastrointestinal Studies from Gene to Disease"

Saitama Prefectural Warabi High School

Date: 20 February
Dr. Robert C. Johns (Canada)
Host institution: Forestry and Forest Products Research Institute
Title: "Insect Ecology—The Foundation of Forest Ecosystem Management"

Seishin Girls' High School (Okayama)

Date: 10 February
Dr. Shubash C. Das (Bangladesh)
Host institution: Hiroshima University
Title: "Prolonged Sperm Survivability in Hen Oviduct"

Senior High School Attached to Kyoto University of Education

Date: 20 February
Dr. Erik D. Reese (USA)
Host institution: The University of Tokyo
Title: "Cosmology: The Universe in Under an Hour"

Shizuoka Prefectural Iwata Minami High School

Date: 4 February
Dr. Nicolas Delsuc (France)
Host institution: Kyoto University
Title: "Selective Recognition and Detection of Proteins on Cell Membrane"

Date: 4 February
Dr. Yuri Bolshan (Canada)
Host institution: The University of Tokyo
Title: "Transition Metals in Organic Synthesis"

Shizuoka Prefectural Kakegawa Nishi High School

Date: 16 March
Dr. Luca Baiotti (Italy)
Host institution: Kyoto University
Title: "New Windows on the Universe"

Wakayama Prefectural Koyo Junior High School

Date: 12 February
Dr. Mark J. Doubell (Australia)
Host institution: Tokyo University of Marine Science and Technology
Title: "Oceans, Light and Life"

Recent Visitors to JSPS (February-April 2009)

Foreign Secretary, British Academy

On 21 April, a group from the British Academy headed by Prof. Duncan Gallie, foreign secretary and vice-president, and including Prof. Peter Kornicki, chair of East Asia Panel, and Ms. Sharon Strange, international manager, Asia, made a visit to JSPS.

JSPS and the British Academy have been carrying out a program to support bilateral academic cooperation in the humanities and social sciences (HSc) since signing a memorandum of understanding (MoU) in 1973.

They exchanged information and views with JSPS president Prof. Motoyuki Ono on recent trends in JSPS and the British Academy (BA). Afterwards, JSPS executive director Mr. Naoki Murata, JSPS Research Center for Science Systems senior advisor Dr. Shiro Ishii, deputy director Dr. Michio Muramatsu, and senior program officer Prof. Kazuo Seiyama joined the discussion and engaged the BA delegation in a spirited exchange of views on HSc trends in Japan and the UK and on Japan and the UK's roles in promoting scientific cooperation with East Asian countries.

— Research Cooperation Division I

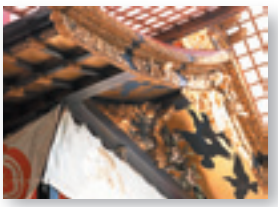
Director General, Swedish Research Council

On 23 April, a Swedish delegation headed by Dr. Pär Omling, director general, Swedish Research Council, and including Dr. Sylvia Schwaag Serger, director, Division of International Collaboration and Networks, Swedish Governmental Agency for Innovation Systems (VINNOVA); Mr. Lennart Stenberg, senior advisor, International Cooperation & Analysis, VINNOVA; and Prof. Anders Karlsson, science & technology counsellor, Embassy of Sweden in Japan, paid a courtesy visit to JSPS president Prof. Motoyuki Ono.

They expressed interest in recent trends in Japan and listened intently to Prof. Ono's explanations of the recent incorporation of Japan's national universities, Japan's S&T budgetary situation, efforts to internationalize Japanese universities, and moves afoot in Grants-in-Aid for Scientific Research. In turn, Dr. Omling and the others described the situation surrounding Swedish universities, including a move away from concentrating support on individual researchers and towards establishing research hubs in individual universities. They also described how efforts are being made through the operation of these hubs and cooperation among multiple universities to elevate, both cooperatively and competitively, the universities' research levels.

They also engaged in an active exchange of views on promoting scientific exchange between Japan and Sweden, and iterated a mutual commitment to advance such bilateral cooperation.

— Research Cooperation Division I



Cover photo:

The roof of a beautifully decorated two-story *yamaboko* float, paraded through town during summer festivals.

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.

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E-mail: fellowsplaza@jsps.go.jp
Fax: +81-3-3263-1854

For further information on JSPS's organization and programs, please visit our website [www.jsps.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
6 Ichibancho, Chiyoda-ku, Tokyo 102-8471
Tel: +81-3-3263-1872 Fax: +81-3-3263-1854
http://www.jsps.go.jp/english/e-plaza/

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

● JSPS Washington Office
1800 K Street N.W., Suite 920,
Washington, D.C. 20006, USA
Tel: +1-202-659-8190 Fax: +1-202-659-8199
E-mail: info@jspsusa.org
http://www.jspsusa.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@jspsusa-sf.org
http://www.jspsusa-sf.org/

● JSPS Bonn Office
Wissenschaftszentrum, Ahrstr. 58, 53175,
Bonn, GERMANY
Tel: +49-228-375050 Fax: +49-228-957777
E-mail: jsps-bonn@t-online.de
http://www.jsps-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@jsps.org
http://www.jsps.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@jsps-sto.com
http://www.jsps-sto.com/

● JSPS Strasbourg Office
Maison Universitaire France-Japon
42a, avenue de la Forêt-Noire,
67000 Strasbourg, FRANCE
Tel: +33-3-9024-2017 Fax: +33-3-9024-2014
E-mail: jsps@japon.u-strasbg.fr
http://jsps.u-strasbg.fr/

● JSPS Bangkok Office
113 TWY Office Center, 10th Fl., Serm-mit Tower,
159 Sukhumvit Soi 21,
Bangkok 10110, THAILAND
Tel: +66-2-661-6453 Fax: +66-2-661-6454
E-mail: bkk03@jsps-th.org
http://www.jsps-th.org/

● JSPS Beijing Office
616 Library of Chinese Academy of Sciences (CAS)
33 Beisihuan Xilu, Zhongguancun,
Beijing 100190, CHINA
Tel: +86-10-6253-8332 Fax: +86-10-6253-8664
E-mail: beijing@jsps.org.cn
http://www.jsps.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@jspscairo.com
http://jspscairo.com/

● JSPS Nairobi Research Station
209/346/39 Riverside Drive Chiromo,
Nairobi, KENYA
Tel: +254-20-4442424 Fax: +254-20-4442112
E-mail: jsps1@africaonline.co.ke
http://www.jspsnairobi.org/