



# Japan Society for the Promotion of Science

## San Francisco Volume XXVIII Issue March 2013



### EVENTS OF WINTER 2013



**JUNBA Held JUNBA2013 on January 11 and 12**

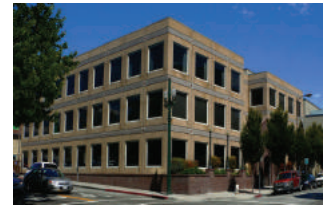
*“Educational Transformation in a Global World beyond International Exchange Programs”*

The Japanese University Network in the Bay Area (JUNBA) held JUNBA 2013 on January 11 and 12, 2013. This event brought together Japanese university leaders to exchange views on educational transformation in a global world from the viewpoint of university management. This event was co-organized by the Consul General of Japan in San Francisco and the Japan Society for the Promotion of Science (JSPS), with support from the Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT) and JETRO San Francisco Office. Over 100 participants attended this event from universities, educational institutions and government offices in Japan and the U.S., including representatives from 15 Japanese universities.



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More Information <http://www.junba.org/junba2013.html>

# EVENTS OF WINTER 2013

The symposium held on the first day began with opening remarks by Masato Matsuo, President of JUNBA, followed by two guest speakers from Stanford University who gave engaging presentations. Dr. Russell A. Berman (Walter A. Haas Professor in the Humanities; Professor of Comparative Literature and German Studies) spoke about “Globalizing the University - The Stanford Experience” and Dr. James D. Plummer (The Frederick Emmons Terman Professor of Engineering; Dean, School of Engineering) talked about “Educating Engineers and Scientists for the 21st Century”. Each presentation was followed by a conversational interview with a JUNBA board member and a Q&A session with the floor. Through the symposium, we could deepen our knowledge and understanding how Stanford has and will continue to internationalize the university, transform their education and make school-based efforts to cultivate a global and interdisciplinary perspective among their students.



(Masato Matsuo, President of JUNBA)



(Right: Russel Berman, Stanford University)



(James Plummer, Stanford University)

On the second day, Masato Matsuo, President of JUNBA, led the Summit with the opening remarks, followed by Hiroshi Inomata, the Consul General of Japan in San Francisco who gave an introduction on the significance of JUNBA. Next, Yuichiro Anzai, President of JSPS also gave a greeting and Kumiko Bando, Director-General of the Higher Education Bureau at MEXT, gave the keynote speech. Japanese university leaders then presented their activities and experiences on how they assure a quality of education and international competitive strength so that they can further promote educational transformation. They then exchanged their views and thoughts in the lively discussion which followed. Finally, to summarize the two-day JUNBA2013 event, the necessity and importance for Japanese universities to be proactive in addressing university reform and internationalization was recognized and shared among participants.



(Kumiko Bando, Director-General of the Higher Education Bureau, MEXT)



## EVENTS OF WINTER 2013



(Yuichiro Anzai, President of JSPS)



In addition, JUNBA core member universities held a Poster Session in the morning of each day, titled “International Educational Programs that Transform Students”. In this session, each exhibitor introduced its activities and efforts to foster human resources in a global world, focusing on their distinctive and innovative student exchange programs.



The successful completion of both days of JUNBA 2013 was achieved through the support and cooperation from many different individuals and organizations. JUNBA is planning to hold a similar event next year to promote the enhancement of education and research activities of Japanese universities.

Date & Time:	Friday, January 11, 2013: 10:00 a.m. -5:00 p.m. Saturday, January 12, 2013: 8:15 a.m.- 5:00 p.m.
Venue:	Hilton San Francisco Airport Bayfront
Organized by:	JUNBA (Japanese University Network in the Bay Area)
Co-Organized by:	Consulate General of Japan in San Francisco Japan Society for the Promotion of Science (JSPS)
Supported by:	Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT) JETRO San Francisco Office

## EVENTS OF WINTER 2013

### Symposium with University of California, Berkeley *“The Media Histories / Media Theories & East Asia”*

On 7-8 February, JSPS San Francisco held a jointly sponsored symposium with the University of California, Berkeley on the theme “The Media Histories / Media Theories & East Asia”. This symposium aimed to foster transnational and local scholarly perspectives on East Asian arts and media theory in the context of recent cross-disciplinary arguments in film and media studies. This symposium featured a retrospective of the films by the Art Theatre Guild (ATG), Tokyo’s center of cinematic innovation from 1961-1988, hosted by UC Berkeley’s Pacific Film Archive, bringing together five invited media theorists from Japan and nearly 40 international scholars.

The event held on the first day began with introductory remarks by Prof. Miryam Sas, UC Berkeley, followed by presentations on *Visuality and City* by Prof. Shunya Yoshimi, the University of Tokyo, and on *Media Art* by Prof. Masaki Fujihata, Tokyo University of the Art. Next, panel sessions by international scholars provided us with a variety of research achievements on this media research field with a very broad base. At the end of the day, three invited scholars from Japan, U.S. and Europe led the round table discussion, which featured the prominent film director Hani Susumu from ATG.



Prof. Miryam Sas

On the second day, Prof. Kuniichi Uno, Rikkyo University, opened the plenary session with a presentation on “Media and the Body”, followed by a presentation on “Pop in Japan” by Prof. Hiroko Ikegami, Kobe University. After the panel sessions, in the closing round table discussion moderated by Prof. Sas, all participants of the symposium lively exchanged their views and thoughts. They emphasized the importance of encounters between different cultures, therefore deepening our knowledge and understanding about Japanese and East Asian cross-cultural developments in media theory and culture from the early twentieth century to the present.

This event also gave valuable opportunities for young scholars in the humanities field to develop an international experience and demonstrate the accomplishments of their constant efforts.

JSPS San Francisco will continuously support such activities to broaden networking between Japanese and U.S. researchers and to foster young researchers.



## EVENTS OF WINTER 2013

### Fellowship Information Session at UCI & UCSD



JSPS fellowship information sessions took place at the University of California, Irvine (UCI) on Feb 14, and the University of California, San Diego (UCSD), on Feb 15. JSPS San Francisco Office (JSPS-SF) holds these kinds of sessions to promote JSPS Fellowship Programs for foreign researchers among universities in North America. This time in So-Cal, the kind support from Director Michelle Lee of the Graduate Extramural Support office at UCI and Dr. Zoe Michel of the Office of Graduate Studies at UCSD made these sessions possible.

In both sessions, firstly Toko Ueta, Deputy Director of JSPS-SF presented the audience with an overview of JSPS Fellowship Programs and the application process. Following that, Mr. Colin Haynes, a PhD candidate in the Department of Structural Engineering at UCSD, featured in both sessions as the guest speaker, showed the ropes about life in Japan to the enthusiastic audience. He participated in the JSPS Summer Program / EAPSI in 2012 at the University of Tokyo.

Mr. Haynes, whose realm of research activity had already been worldwide even before his visit to Japan, shared his rewarding experiences in his first visit to an Asian country. His well-organized presentation showcased that the 10-week program and a well-prepared research environment enabled an earnest graduate student both to engage in serious research activity and to enjoy “cool Japan.”

As the relatively small-sized audience created an easy-going atmosphere, the Q & A session became conversational. The participants raised many questions about detailed eligibility information, the language to use for the application, how to obtain a visa, housing in Japan, and so on, all of which only prospective candidates would ask. Hoping more applications will be coming in from those institutes in the future, JSPS-SF concluded the sessions successfully.



### The 22nd Gathering of JSPS Japanese Fellows in JSPS SF Office



On February 2nd, JSPS San Francisco held its 22nd “Gathering of JSPS Japanese Fellows in the U.S.” in Berkeley, California.

This meeting is aimed to promote enduring relationships and establish mutual networks among JSPS research fellows who are active in various fields of study in the U.S. This time, 22 fellows under JSPS Fellowship Programs, along with members of JSPS headquarters and San Francisco office attended.

The meeting started with greetings from Dr. Seishi Takeda, Director of JSPS San Francisco. Following that, Mr. Isao Oshiro, Head of JSPS Research Fellowship Division, gave an explanation on the institutional system of JSPS fellowships for Japanese doctoral and postdoctoral researchers.

Then each participant made a presentation about their current research activities followed by a lively exchange of questions and answers. After the meeting, a standing reception was held and everyone engaged each other in free conversation about their diverse activities and experiences in the U.S.

There were many participants not only from the west coast but also from distant regions, such as New England. They appreciated that they were provided a good opportunity to meet other researchers whom they otherwise might not have met since they work at different institutions. This gathering also provides a good opportunity for JSPS staff to hear from the researchers their thoughts about JSPS fellowship program systems.

JSPS San Francisco will continue to provide such valuable opportunities for network building events among young Japanese researchers.

## 気付き – ADVISER'S INSIGHT IN THE BAY AREA

By Yoshiko Motooka, Adviser of JSPS San Francisco

### Polish up the Skills of “Critical Thinking and Discussion”

I was profoundly impressed with the lecture that was part of the Intensive Course in English: “Global World and Academics; Insights from American Universities” of Osaka University D-Leaning Series, offered by Osaka University San Francisco Center. It was a small-group exercise lesson, given over three days, February 11<sup>th</sup>-13<sup>th</sup>, 2013 Pacific Standard Time. Sixteen freshmen and sophomores from Osaka University attended these lectures.

In the first half, Prof. John Ino (UC San Francisco) gave the lecture, taking some controversial but personal issues accompanying the advances of science and technology; for example, genetic analysis (Do we consider sex based by genetics or hormones? Do you want to know if you have the ‘Divorce Gene’ or ‘Alzheimer’s Gene’?).

In the latter half, Prof. Hiroshi Fukurai (UC Santa Cruz) delivered the lecture with more advanced themes such as the nuclear issue and citizen participation in law.

I would like to point out the excellent points of this course. The first is the well-made structure of the lesson. At the beginning, the students were instructed on critical thinking methods. Next, given the examples and basic knowledge on the subject matter, they first contemplated on it, and then exchanged opinions within small-groups and finally shared the opinions of the groups with everyone. Through numerous examples, they seemed to acquire critical thinking skills and enjoy exchanging their opinions. Beginning with the easier issues and reaching to high-level policy issues, this exchange was so meaningful for these young first and second year university students..

The second excellent point is the student support provided by the staff.. In the classroom in Japan, the professor is there to help students review the lecture at the end of each day. In the United States, it is said that the main method of teaching in the classroom is interactive and on the other end are lectures. As for the lectures, many universities have support systems to help students understand them; for example computer-based support or teaching assistants, and they are working well. About ten years ago, when I went to university, the classes were almost all listening based lectures and there were very few interactive classes. I sincerely hope not only to increase interactive classes but also to provide stronger student support systems now and hereafter in Japan.



Left: Prof. John Ino Right: Prof. Hiroshi Fukurai



## THE OFFICE STAFF SWITCH

### JSPS San Francisco Wishes a Heartfelt Farewell to Program Coordinators

Daisuke Iwasawa and Koji Kurita have fulfilled their 1 year training as Program Coordinators for JSPS San Francisco. Returning to Japan at the end of March, they start working for the universities which they each belong to. Here are some comments from our Program Coordinators about their stay in the U.S.

#### Daisuke Iwasawa, from Tokyo Gakugei University



*Q1. What did you accomplish during your time here in the U.S. and with JSPS San Francisco?*

I learned how to organize an international, large-scale symposium through JUNBA with help from my colleagues and member universities. I also visited many universities in the U.S. from the North to South and East to West, captivated

by their beautifully and orderly designed campuses. There I could meet diverse, unique mascot characters of American universities.

*Q2. What will you miss the most about America?*

I'm sorry that I will no longer be able to see the wonderful view of San Francisco from my apartment in Albany. The cityscape of San Francisco lined with skyscrapers and the red-colored Golden Gate Bridge with the deep blue sea and sky have always relaxed me. I will also miss the delicious pineapple duck curry from my most favorite Thai-California Eatery "Gecko Gecko," which is located just in front of our office.

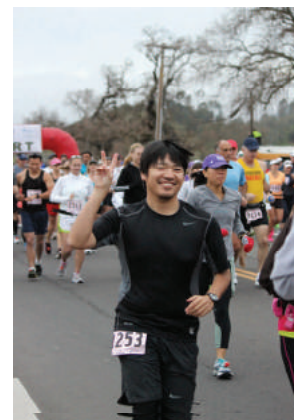
#### Koji Kurita, from Kyushu University

*Q1. What did you accomplish during your time here in the U.S. and with JSPS San Francisco?*

I could gain knowledge of the higher education system in the U.S. by visiting universities and talking with faculties and administrative staffs. Additionally, it was a valuable opportunity for me to know the research activities of young Japanese researchers in the U.S. through the gatherings in our office and by visiting their laboratories.

*Q2. What will you miss the most about America?*

I will miss the beautiful scene on the coast around the bay area. Especially, the "Pacific Coast Highway" is my most favorite driving course and I enjoyed seeing the landscape while driving. The beauty of the cloudless sky and deep blue sea on the west coast is unforgettablely impressive for me. Of course, I will also miss my wonderful co-workers and the SF office.



### JSPS San Francisco Always Welcomes Your News

We are looking forward to hearing your news regarding international related events and so on.

If you have any news about your institution or your research, please feel free to ask us about including it in this newsletter.

This newsletter will be distributed to international sections in Japanese universities and subscribers in the Bay Area.

Contact: JSPS San Francisco

E-mail: [webmaster@jpsusa-sf.org](mailto:webmaster@jpsusa-sf.org) / URL: [http://www.jpsusa-sf.org/index\\_j.php](http://www.jpsusa-sf.org/index_j.php)

## BAY AREA & JAPAN RELATED NEWS



### KOCHI UNIVERSITY

#### Kochi University Research Project

#### “Center of Biomembrane Functions Controlling Biological Systems”

The cell, basic unit of life, consists of the genome system (nucleic acids and their primary products, proteins) and the membrane wrapping it, which are both indispensable. The membrane defines the unit boundary in which the genome system works. The membrane serves as the interface between the cell and its environment, and mediates communication between them.

In the Center of Biomembrane Functions Controlling Biological Systems (CBM), we intend to approach biological systems from the viewpoint of biomembranes. Biomembranes consist of lipids and glycans that are not a direct product of the gene. Additionally, membrane proteins that are a direct product of the gene are integrated into them, forming a functional unit (Fig. 1). So far, understanding of the genome system is considerably progressed by genomics and proteomics research. However, little is known about biomembranes.

In the CBM, we aim at elucidation of the biomembrane functions to control biological systems (Fig. 2). To this end, three groups explore the following themes (Fig. 3).

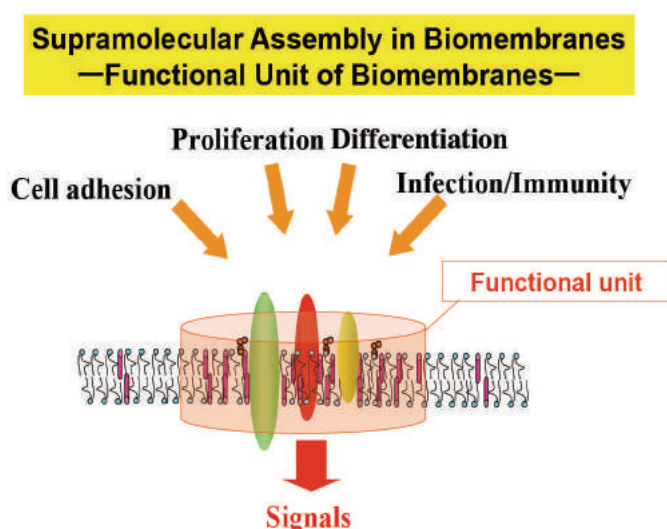
Theme 1: Discovery of unknown components of the membrane structure (by Component Group).

Theme 2: Identification of molecular interactions in the biomembranes that collaborate for forming a functional unit (by Network Group).

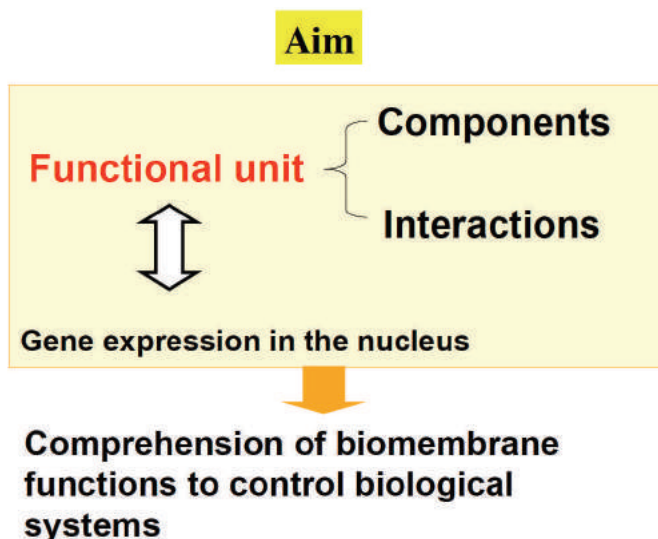
Theme 3: Elucidation of signal transduction pathways from the membrane to the nucleus, and vice versa (by Signal Group).

In the CBM, experts in a variety of fields of medicine collaborate with each other: biochemists and molecular biologists that are experts in carbohydrates, lipids, proteins, and nucleic acids; pharmacologists, microbiologist and immunologist that have concerns about biological phenomena in their respective areas of expertise; and pathologists and clinicians that have questions in terms of clinical issues.

The CBM will foster youthful scientists studying biomembranes and also support clinicians and researchers outside the CBM for their researches at the molecular level.



**Fig. 1. Supramolecular assembly as a functional unit in biomembranes**



**Fig. 2. Aim of the CBM project.**



# BAY AREA & JAPAN RELATED NEWS

## Groups and Mission

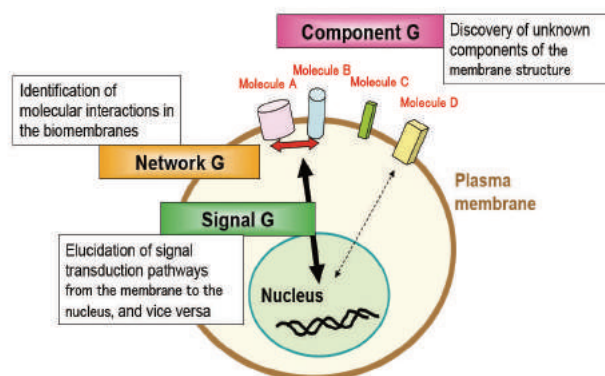


Fig. 3. Missions of the CBM project.

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## 東京工業大学 TIER Symposium "Cultivating Global Leaders through World-Class University Collaborations"

Tokyo Institute of Technology

On January 17, 2013, TIER Symposium titled "Cultivating Global Leaders through World-Class University Collaborations" was held at Tokyo Institute of Technology (Tokyo Tech), Ookayama Campus. TIER (Tokyo Institute of Technology International Education and Research) Program, implemented under MEXT's funding scheme "Re-inventing Japan Project" is Tokyo Tech's flagship initiative to promote international exchange. In 2012, two unique research-based exchange programs, TKT CAMPUS Asia and TiROP, were launched for this purpose with Tokyo Tech's designated partner universities in Asia, Europe and the US.

This symposium served as a platform for Tokyo Tech and its world-class partner universities to introduce their own leading international programs, exchange information and discuss international collaborations in order to cultivate global techno-scientific leaders. Approximately 150 guests from various world-class partner universities, embassies, associated organizations as well as Tokyo Tech's own faculty members were in attendance for this one-day event.

Discussions and presentations were held throughout the day, offering many great ideas and approaches for improving international collaborations between Tokyo Tech and its partner universities. Tokyo Tech would like to thank everyone involved in making this event successful and will continue to work diligently towards becoming one of the top science and technology universities in the world.

Invited universities for presentations:

University of Tokyo; Keio University; Korea Advanced Institute of Science and Technology; Tsinghua University; Hong Kong University of Science and Technology; Nanyang Technological University; Delft University of Technology; RWTH Aachen University; California Institute of Technology; University of California, Berkeley; Georgia Institute of Technology.



President Yoshinao Mishima giving the opening remarks

# BAY AREA & JAPAN RELATED NEWS



**Saitama University Brain Science Institute**  
**The research project of Junichi Nakai laboratory**

Saitama University Brain Science Institute aims to implement research related to the clarification and application of brain function from the viewpoint of life science, science, and engineering. Bringing together brain science and the technical research related to brain science conducted in Saitama University, we attempt to give the outcome back. In our institute, Professor Junichi Nakai and his colleagues are working to reveal how neuronal networks function in the brain. Imaging the activities of individual neurons *in vivo* with genetically encoded fluorescent molecular probes is a promising method for understanding neuronal network functions. Since we published our original green fluorescent protein (GFP)-based  $\text{Ca}^{2+}$  probe G-CaMP (Nature Biotechnology 19, 137-141, 2001), G-CaMP and its improved variants have been applied for functional studies in model animals in various research fields (We have received hundreds of requests for G-CaMPs from researchers in the world, including requests from University of California in the Bay Area and from Montana State University in northwestern US). We recently developed a high-sensitivity G-CaMP termed G-CaMP6 and applied this probe for  $\text{Ca}^{2+}$  imaging of dendritic spines, the putative post-synaptic sites. As a result, with the use of G-CaMP6-actin, our new probe for spine  $\text{Ca}^{2+}$  imaging, we found that even sub-threshold stimulations can trigger spine  $\text{Ca}^{2+}$  responses. The laboratory is wide open to graduate students and young researchers who are enthusiastic to reveal how neuronal networks function in the brain. There is no restriction to nationality. For more details, please visit <<http://subsi.saitama-u.ac.jp/>>

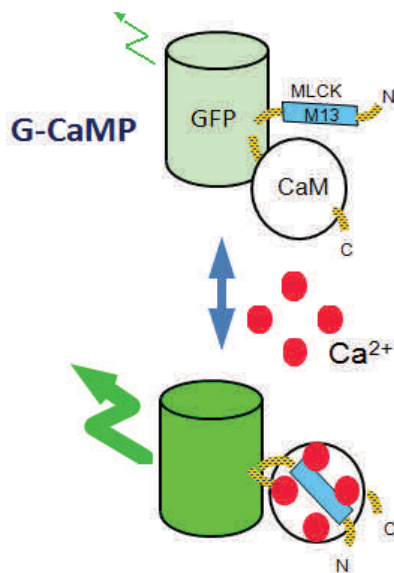


Fig. 1. Operating principle of G-CaMP

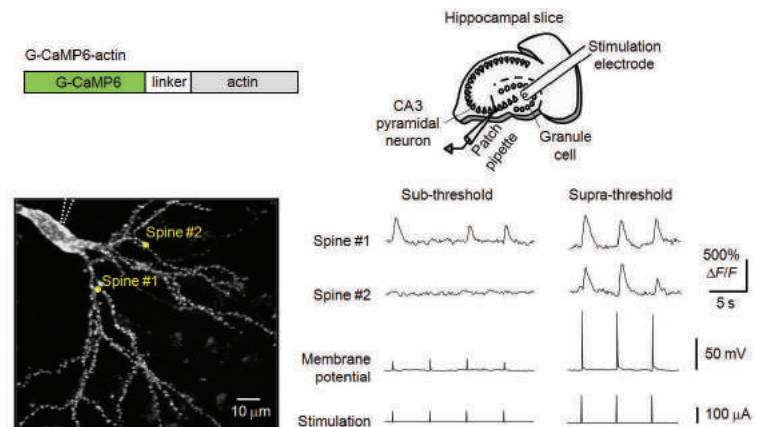


Fig. 2. Imaging of  $\text{Ca}^{2+}$  activities at individual dendritic spines in response to sub- or supra-threshold stimulations

## BAY AREA & JAPAN RELATED NEWS



### HOKKAIDO UNIVERSITY

#### Leadership Skills are Keys for Women Scientists to Break the Glass Ceiling



Modeled after the ADVANCE program of the National Science Foundation (NSF), the Japanese national project started in 2006, initially at 10 universities including Hokkaido University. Our aim is to promote representation of women in academic science and technology and to support their careers along with their families. Although more than 70 universities and national institutes have implemented the project to date, the ratio of women who assume leadership positions remains disappointingly low.

Hokkaido University has been developing programs to prepare future faculty by adopting the methods of UC Berkeley. The support office for Female Researchers in Hokkaido University (FResHU) applied UC Berkeley's methods to devise two days of instructive workshops for young female faculty aspiring to be academic leaders in science, engineering and agriculture fields. Instructors Dr. Linda von Hoene and Dir. Sabrina Soracco from UC Berkeley provided an original, tailor-made program. Fifteen participants, including four from other Japanese universities actively promoting women in science, enjoyed the leadership workshop at Niseko in September last year and formed a "young girls' network" to help break ground and ceiling. This fall we'll be offering both introductory and more advanced leadership workshops, of a similar scope, to be led by the same instructors from Berkeley.



Endowing women scientists and female motivated students with leadership skills is a priority at Hokkaido University and throughout Japan. We now proudly add "Girls" to the credo "Boys be ambitious", which are the immortal words of Dr. William Clark, an American scientist who contributed significantly to the establishment more than 150 years ago. Women are poised to be pivotal in future scientific efforts to secure sustainable development for our global village. We Japanese are a few steps behind, but still on the same path and anticipate achieving the same goals. We thus have a lot to share and gain through the course of steadfast cooperation between our two countries.

## BAY AREA & JAPAN RELATED NEWS



### HOKKAIDO UNIVERSITY

#### Research and Development of Astronomical High-contrast Instruments – Towards Discovery of a “Second Earth”

The Laboratory of Photonics Engineering of Hokkaido University has been studying high-contrast astronomical instruments called coronagraphs, for observing exoplanets (planets orbiting around stars other than the Sun). Observation of the exoplanets is extremely difficult because planets are very faint compared with their host stars. For example, the Earth is expected to be 10 billion times fainter than the Sun. Coronagraphs must be designed to efficiently eliminate bright starlight and detect only faint planetary light. We expect that detailed analysis of the detected planetary light will enable us to characterize planetary atmospheres and ultimately discover signs of life!

I will be staying at the NASA Jet Propulsion Laboratory (JPL) of California Institute of Technology from March to December 2013. JPL has a state-of-the-art coronagraph simulator, called the High-Contrast Imaging Testbed (HCIT), for simulating observations from space using various coronagraphs. I plan to research and develop a coronagraph with the ultimate aim of discovering a “second Earth”. If you are interested in our research, please contact me during my stay at JPL.

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**URL 1:** <http://www.eng.hokudai.ac.jp/labo/photonic/index-e.html>

**URL 2:** <http://science.jpl.nasa.gov/index.cfm>



Fig. 1. Logo of JPL.

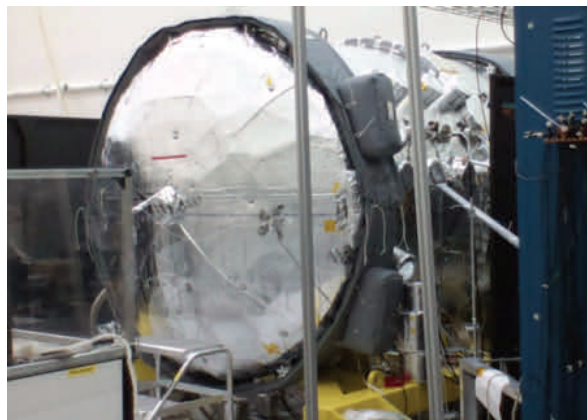


Fig. 2. Photograph of HCIT at JPL. A coronagraph simulator is installed in a vacuum chamber.

## BAY AREA & JAPAN RELATED NEWS



### Tohoku University

#### Tohoku University Center Opens at University of California Riverside

On February 1, 2013 Tohoku University opened the Tohoku University Center at its partner school, the University of California Riverside (UCR) Extension Center. An opening ceremony was held on February 11 (Monday), local time.

Tohoku University (all campuses) was selected for the Japanese government's Project for the Promotion of Global Human Resource Development.\* In connection with this, the Tohoku University Center will play a role in the critical areas of promoting the internationalization of education and fostering global human resources, by further improving our overseas study and education environment in cooperation with UCR.

Specifically, the center will be Tohoku University's on-site hub for cooperation and organization with UCR in jointly planning, developing, and implementing various study-abroad programs for fostering global human resources. In addition, it will provide information on studying abroad to both Tohoku University and UCR students and function as a liaison office.

The cities where the two universities are located -Riverside for UCR and Sendai for Tohoku University- are sister cities. In 2007, four institutions, including UCR and our university, signed a joint declaration to promote the exchange of education, academic research and business-academic ties. This project is expected to be the center of a ripple effect that will stimulate cooperation with the regional community and internships with local enterprises.

At the event, around 100 people celebrated the opening, including Tohoku University President Satomi, UCR Chancellor Jane Close Conoley, Riverside Mayor Rusty Bailey, and representatives from relevant institutions. In addition, current participants in short-term study abroad programs from Tohoku University and UCR students who formerly studied at Tohoku University were present.

\*Project for Promotion of Global Human Resource Development

This project will provide focused financial support for programs that promote globalization in university-level education that help Japanese youths overcome their "introverted tendencies," increase their international workplace competitiveness, and strengthen ties between countries, in order to foster "human resources" capable of actively meeting the challenges of the global stage.



From left: Tohoku University President Satomi, UCR Chancellor Jane Close Conoley, Riverside Mayor Rusty Bailey



The UCR Extension Center, home of the Tohoku University Center

Contact email: [tuc-riverside@bureau.tohoku.ac.jp](mailto:tuc-riverside@bureau.tohoku.ac.jp)  
(Tohoku University Center at UCR / Tohoku University, Student Exchange Division)

## INTERVIEW WITH JSPS FELLOW IN THE U.S



**Dr. Shun'ichiro AKIKUSA** has mainly been studying Vladimir Nabokov and his translation (including his specific self-translation and translation theory). He is currently studying world literature, e.g. contemporary Russian immigrant writers and self-translated writers in the twentieth century as well.

*Q1: Why did you choose the U.S. to pursue your research?*

The reason why I have reached Cambridge is because I would like to reconsider my works under the term "World Literature." In his monograph, Professor David Damrosch, a leading scholar in this area and my present adviser at Harvard, defines World Literature not as a canon of texts like old huge anthologies in many volumes but as a kind of more fluid substance, a mode of circulation and reading. As a World-literature-ologist, I myself try to circulate through the wider world.

*Q2: What is your impression of the research environment in the U.S.? How is it different from your lab in Japan?*

Since I have arrived at Cambridge, I have been circulating through splendid libraries such as Widener, Lamont and Houghton at Harvard. I have also visited other university's acclaimed archives such as Beinecke at Yale and Amherst Center for Russian Culture at Amherst. I have always been impressed by American openness which you can find not only in their library's open-stack system but also in their open-minded hospitality towards foreigners.

### Dr. Shun'ichiro AKIKUSA

2006-2009: JSPS Research Fellow at the University of Tokyo (DC1)

2009: Ph.D., The University of Tokyo, Graduate School of Humanities and Sociology

2009-2012: JSPS Research Fellow at the University of Tokyo (PD)

2009-2010: Honorary Research Fellow at the University of Wisconsin -Madison / the Excellent Young Researcher Overseas Visit Program of JSPS

2012-: Visiting Researcher at the Comparative Literature at Harvard University (Through the Postdoctoral Fellowships for Research Abroad)

Generally speaking, savants of humanities don't have any lab or practice room for research. Instead of a common laboratory or compulsory labor, literary scholars have the privilege of doing their job anywhere you can indulge yourself in reading books, e.g. a quiet reading room both in the library and your own house (if you are a happy bachelor), or a cozy café on a street corner. From this point of view, coffee houses in Cambridge are not so bad; I assure you that you can taste strong coffee served Japanese style while enjoying free Wi-Fi at café Dwelltime.

*Q3: What merits do you derive from conducting your research in the U.S.?*

I became acquainted with an amicable literary professor visiting here while on his sabbatical. He took many courses, played timpani and went to concerts every night. Although, unfortunately, I am utterly ignorant of how many papers and monographs he would have published in his way of researching, my approach to literature is different from him. Instead of taking many courses, I need a more isolated circumstance. Though temporal conversation with erudite colleagues adds relish to the cut-and-dry life of research, literary study is a personal, solitary business as a rule. Studying in a foreign country bestows a proper solitude with linguistic barriers on you. I always appreciate JSPS for giving me these two years of solitude in Cambridge. Instead of cymbals and concerts, I need to exercise every other day, e.g., jogging, rope-skipping and swimming. To bear the loneliness of the long distance literary

scholar-runner, physical conditioning is a matter of ultimate importance. In this regard I appreciate Harvard for offering me not only Blogett pool with abundant water but also Haruki Murakami's favorite jogging course along Charles River.

*Q4: What is your dream? And do you have any advice about doing research abroad for young researchers?*

For the first question, I would like to quote the answer of Dr. Yukio Nakano, my former colleague in graduate school at the University of Tokyo—"My dream is very simple. To continue studying literature" (*JSPS News Letters*, Vol. 18, June 2010). This is a common dream for all literary scholars, I believe.

For young scholars, I would like to advise you to keep maintaining your academic network regularly after leaving the U. S. It is a treasure of life, worthy of being revisited again and again. Three years ago, I studied at UW-Madison for a year, thanks to the Excellent Young Researcher Overseas Visit Program of JSPS. I enjoyed interacting with grad students and scholars in Madison Isthmus. The Madison-mafia-connection is still living and has helped me ever since. Additionally, after experiencing a super hibernal season in Madison, I feel much warmer in the winter of New England.

## INTERVIEW WITH JSPS FELLOW IN THE U.S



### Dr. Hiroyuki CHISHIRO

2008: B.S., Faculty of Science and Technology, Keio University

2010: M.S., Graduate School of Science for Open and Environmental Systems, Keio University

2012: Ph.D., Graduate School of Science for Open and Environmental Systems, Keio University

2012 - present: JSPS Research Fellow (PD) / Visiting Researcher at Faculty of Science and Technology, Keio University / Visiting Scholar at The University of North Carolina at Chapel Hill

**Dr. Hiroyuki Chishiro** is a visiting researcher in the Department of Information and Computer Science at Keio University. He is also a visiting scholar at The University of North Carolina at Chapel Hill. He received his B.S., M.S., and Ph.D. degrees from Keio University in 2008, 2010, and 2012 respectively. His research interests include real-time scheduling, real-time operating systems, real-time communication, and distributed real-time middleware.

#### *Q1: Why did you choose the U.S. to pursue your research?*

My research topic, “real-time operating systems,” is led by the U.S., especially by my U.S. advisor, Prof. James H. Anderson. His lab develops a multiprocessor real-time Linux operating system to provide a useful experimental platform for applied real-time systems research. In the real-time community, many researchers simulate the effectiveness of multiprocessor real-time scheduling, but his lab demonstrates it in practical systems. The research policy of his lab is very close to my own so I decided to collaborate with him.

The other reason why I chose the U.S. is that many products and services made in the U.S. are popular in Japan; for example, (i) hardware products (i.e. Corei7, Fusion, Cortex-A9, and GeForce) developed by Intel, AMD, ARM, and NVIDIA Corporations, (ii) operating systems (i.e., Windows and Mac) by Microsoft and Apple Corporations, and (iii) web services (i.e. search engine, storage system, and website design) by Google and Yahoo Corporations. This grants me an opportunity to study products and services in many leading companies.

#### *Q2: What is your impression of the research environment in the U.S.? How is it different*

#### *from your lab in Japan?*

First of all, the labs in the U.S. have fewer students or visiting scholars in each office. By contrast, in my Japanese lab, all students work in one office. In addition, I share my U.S. office with a student from another lab. Therefore, I can discuss my research not only with my colleagues but also with other groups. I think that this is a good system to promote research.

Next, attending UNC’s events is just as important as doing research, especially basketball games. Though students are busy doing research, they watch basketball games and cheer for UNC’s basketball team. UNC is best known as Michael Jordan’s graduating school. Therefore, I like and enjoy UNC’s environment, including both research and daily life.

#### *Q3: What merits do you derive from conducting your research in the U.S.?*

The first merit is to get advice from many excellent researchers. I sometimes talk about my research and get feedback from them to improve my research. Without their feedback, my research could not become better.

The second merit is to collect information easily. Many leading researchers and developers come to UNC to talk about their research and development projects. In Japan, there are hardly these opportunities. Thanks to these opportunities, I am exposed to many state-of-the-art topics in computer science. Acquiring this knowledge is important to conducting research.

The third merit is to improve English communication and discussion skills. There are many opportunities to talk about myself in English so that I can explain myself easier than when I had visited UNC. I think that

good researchers must have good English communication and discussion skills to explain their opinions.

#### *Q4: What is your dream? And do you have any advice about doing research abroad for young researchers?*

My first dream is to find the best multiprocessor real-time scheduling in real-time operating systems. To do this, I collaborate with Prof. James. H. Anderson. Multiprocessor real-time scheduling has trade-offs between real-time capacity and overhead. Many researchers in the real-time community explore the best real-time capacity of multiprocessor real-time scheduling for many years but never find it. Therefore, I would like to find and demonstrate that my multiprocessor real-time scheduling is best.

My second dream is to make use of my multiprocessor real-time scheduling in actual real-time systems. For example, autonomous mobile cars are excellent target applications in my research topic. However, there are many practical problems to realize them. For example, they must manage many sensors and actuators to control themselves. These tasks require strong real-time capacity so that existing multiprocessor real-time scheduling is not enough to satisfy it. There is hope that my best multiprocessor real-time scheduling can solve these problems.

I strongly recommend that young researchers research abroad. Surely, there will be some problems including English, culture, and environment but these problems can be solved. If you would like to do excellent research, you should seek out solutions to these problems; research is a challenge!

## INTERVIEW WITH JSPS FELLOW IN THE U.S



### Dr. Masayuki SAKAMOTO

2003-2007: B.S., Department of Pharmaceutical Sciences, Gifu Pharmaceutical University

2007-2009: M.S., Graduate School of Biostudies, Kyoto University

2009-2012: Ph.D., Graduate School of Biostudies, Kyoto University

2010-2012: JSPS Research Fellowships for Young Scientists (DC2)

2012-present: Postdoctoral Fellow, Department of Biological Sciences, Columbia University

2012-present: JSPS Postdoctoral Fellow for Research Abroad

**Dr. Masayuki Sakamoto** received his Ph.D. from the graduate school of Biostudies, Kyoto University in 2012. He studied adult neurogenesis in the Institute for Virus Research (Supervisor: Dr. Ryoichiro Kageyama). He studied the functional roles of newly born neurons in the olfactory bulb. He found that continuous neurogenesis is required for the innate olfaction-dependent activities (i.e. mating behaviors, maternal nursing). After getting his Ph.D., he started to work at the Department of Biological Sciences, Columbia University (Supervisor: Dr. Rafael Yuste). Now he is learning an imaging technique and trying to visualize neural activities with genetically encoded indicators. This skill is necessary to understand our brain function and will lead to the development of new therapies and drugs for the treatment of neuronal diseases.

#### *Q1. Why did you choose the U.S. to pursue your research?*

Recent advances in science and technology are remarkable. They make things considered impossible just a decade ago become possible. One of the powerful tools that I am interested in is a two-photon microscope. Using this microscope, we can monitor neuronal activities in living animals. When I was a Ph.D student, I studied relationships between adult neurogenesis and brain functions with genetic methods. Through this study, I realized that these methods had some limitations. In order to understand neural functions, it is necessary to apply imaging techniques. Two-photon imaging has been popularly used in the past ten years in European and American countries. However, two-photon techniques have not been widely used in Japanese laboratories. To learn two-photon imaging, I decid-

ed to go abroad and study at the laboratory of Dr. Rafael Yuste. He is a pioneer in the field of two-photon imaging in the mammalian brain, and kindly allowed me to study in his laboratory.

#### *Q2. What is your impression of the research environment in the U.S.?*

##### *How is it different from your lab in Japan?*

In my opinion, the lab research environment is very different from Japan. First, the work-life balance is different from Japan. Unlike researchers in Japan, most researchers in the U.S. do not stay at the laboratory late. They focus on their work between 9am to 5pm. They cherish their family and spend more time with them. The second difference is the organization of scientific meetings. During the meeting, they thoroughly discuss their research with colleagues. Researchers are willing to discuss both positive and negative results. Furthermore, there are many interdisciplinary meetings which can provide various points of view. These meetings are very helpful for my research.

#### *Q3. What merits do you derive from conducting your research in the U.S.?*

There are two advantages. The first one is collaboration between scientists in different fields. They are very cooperative, and I can get helpful comments and suggestions from various points of view. Thanks to this advantage, my project progresses smoothly. The second one is the opportunity to experience foreign cultures. As for New York City, there are many forms of entertainment, such as art, music, and sports. We don't have many opportunities to get in touch with these cultures in Japan. I believe these experiences will cultivate my sensibilities and will be helpful to my future.

#### *Q4. What is your dream?*

##### *And do you have any advice about doing research abroad for young researchers?*

My dream is to clarify neural networks and functions that are unknown at present, and to apply my findings to clinical research. As you know, our brain has a very complex structure and there are a lot of things that we don't know. Also, there are an increasing number of people suffering from neuronal disease (Alzheimer disease, Parkinson disease, and Schizophrenia). Imaging techniques provide a powerful tool that can facilitate dissecting complex brain structure and understanding functional relationships within neural networks. I believe that understanding brain networks and functions using imaging will lead to the development of therapies and drugs for treatment of these neurodegenerative diseases.

Finally, as a message to young researchers, I recommend them to go abroad for their research. Doing research abroad will be a great experience for your life as well as research career. Please don't hesitate to go abroad. It's true that Japan has a lot of advantages over other countries and you may struggle with different languages and cultures. However, you can learn a lot of things, such as the way to work and communicate through research abroad. These skills are indispensable for scientists who will succeed in an international community. Also, you can see Japan from the outside. English skill does not matter. The important thing is a strong will to do research abroad. Doing research in another country will be a precious experience for your future and will make you a better scientist. Therefore, I strongly encourage young scientists to go abroad.