



# Japan Society for the Promotion of Science

## San Francisco Office

2001 Addison Street, Suite 260 Berkeley, CA 94704 USA

### Events of Summer 2008

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#### Inside this issue:

Events of Summer 2008	1
Events of Summer and Fall 2008	2-3
Announcement of Upcoming Event 2008	4-5
Interview with JSPS Fellow in the U.S.	6
Bay Area and Japan Related News	7-8

#### JSPS San Francisco Office held the 9th Gathering of JSPS Japanese Fellows

On 27 June, JSPS San Francisco Office held its ninth "Gathering of JSPS Japanese Fellows" in Berkeley, CA.

These meetings are meant to promote cross-disciplinary exchange among Japanese researchers laboring in the US. While serving to deepen the friendly relationships among them, the meetings also provide the researchers with an opportunity to build working networks. Participating in this year's gathering were 24 researchers, many of whom were on JSPS Postdoctoral Fellowships for Research Abroad and Research Fellowships for Young Scientists. Still others were invited from among Japanese researchers currently residing in the US.



In the meeting, San Francisco Office director Prof. Seishi Takeda offered a toast to kick off the confab among the participants. In a pleasantly relaxed atmosphere, they engaged each other in free conversation about their diverse activities and experiences in the US. Time was also set aside for the participants to introduce themselves and briefly describe their research work. Giving them a context to delve deeper into each other's work, this further energized their discussions, which continued on even after Prof. Takeda gave his closing remarks. It is hoped that such vibrant interchange will lead to wider networking among Japanese researchers in the US.



#### The 10<sup>th</sup> Gathering of Japanese Fellows in NY

November 7th 18:00-20:00

JSPS San Francisco Office will hold the 10<sup>th</sup> Gathering of JSPS Fellows on November 7th in New York City. The purpose of this gathering is to provide Japanese researchers in the U.S. with a good opportunity to share useful information, promote the exchange of research, not only in common research fields but in different research fields, and support networkbuilding among these researchers. We have had 9 gatherings in the past, and this time, we will hold the next gathering in New York City, NY. We are looking forward to a lot of researchers' participation.

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## EVENTS OF SUMMER & FALL 2008

### OSAKA University and TOHOKU University held a Joint Forum

#### “Innovative Research and Philosophy of Science”

On September 18th, OSAKA University and TOHOKU University held a Joint Forum at the Palace Hotel in San Francisco, CA. The Forum started with Opening Remarks by Prof. Kiichiro Tsuji, Vice-President of OSAKA University. Then, Honorable Yasumasa Nagamine, Consul-General of Japan gave his address. He emphasized that it was very important for Japanese Universities to collaborate with each other.

The address was followed by keynote speeches by Kiyokazu Washida, President of OSAKA University and Toshiya Ueki, Executive Vice-President of TOHOKU University.

The Joint Forum was a success with many participants.



### KAGOSHIMA University visits JSPS San Francisco Office for the 5th Silicon Valley Seminar

On September 24th, Japanese graduate students and staff members from Kagoshima University visited JSPS San Francisco Office after having heated discussions with young researchers at UC Berkeley. As one part of the 5th Silicon Valley Seminar, Dr. Seishi Takeda, director of our office, gave a lecture to encourage the young students from KAGOSHIMA University and explained the history of Silicon Valley, which has been one of the biggest central areas for IT industry by the great efforts of young engineers.

On September 26th, KAGOSHIMA University and KAGOSHIMA University North American Center held the 3rd US-Japan Future Forum at Clark Center Auditorium, Stanford University. Dr. Seishi Takeda delivered a congratulatory address at the forum.

These events were a great success with heated sessions and many participants from various fields.

JSPS San Francisco Office supported the seminar and the forum.



## Public Symposium regarding Jomon Held with UC Berkeley

### "Prehistoric Jomon of Japan and Hunter-Gatherer Lifeways"

On September 19th and 20th, the JSPS San Francisco Office convened a public symposium in co-sponsorship with UC Berkeley's Center for Japanese Studies (CJS). Held in the Institute of East Asian Studies (IEAS) Conference Room, the symposium addressed the theme "Prehistoric Jomon of Japan and Hunter-Gatherer Lifeways". "Jomon" is the name of the prehistoric culture and period on the Japanese archipelago from 14,000-2,500 years ago.

Invited to address the symposium were twelve from Japan, the US, and Canada, who gave presentations focused on the topic of Jomon and some other prehistoric archaeological topics. The room was full from undergraduate students to senior researchers to the general public.

The event started with remarks by CJS chair Prof. Duncan Williams. He was followed by JSPS San Francisco Office director Prof. Seishi Takeda, who welcomed the participants. In the morning, keynote speeches were delivered and the first session held; another session was held in the afternoon. Each of the sessions featured paired presentations, followed by questions from the audience.



Most of the presentations by guest speakers from Japan were convened on the second day. This time, the range of approach to Jomon was so wide, it not only encompassed the traditional archaeological approach, but also touched upon anthropology and even DNA analysis which some of the speakers were experts on. After each presentation, very active questions came out from the audience. The symposium became an epoch-making event as the beginning of future collaboration among different research fields and also among Japan, the US and Canada.

Furthermore, graduate students who conduct Jomon research here in Berkeley asked questions regarding research opportunities in their field in Japan. We proudly introduced JSPS fellowship programs.

The program of this event can be found on the following website:  
<http://ieas.berkeley.edu/events/2008.09.19w.html>





**OSAKA UNIVERSITY**

We are pleased to announce that Osaka University is giving a forum entitled

**“Osaka University Forum 2008 : Bio-Environmental Chemistry”**

The Osaka University Forum is an annual symposium that brings together international science leaders to explore trends and specific areas of current research work. The forum has been hosted at various famous academic venues around the world. In past years it has been held in the US, Germany, Switzerland, France, Vietnam and the Netherlands. The 8th Forum will focus on bio-environmental chemistry.

**DATE:** December 8 (Monday) , 9(Tuesday) and 10 (Wednesday), 2008

**VENUE:** Milton Marks Conference Center “Great Hall”

455 Golden Gate Avenue, San Francisco, CA. 94102-3688, USA

**HOSTS:**

Osaka University

Osaka University Global COE Program “Global Education and Research Center for Bio-Environmental Chemistry ”

**REGISTRATION:** free

**FURTHER INFORMATION:**

URL: <http://www.gcoebec-osaka-u.jp/forum2008/index-e.html>

[info@osaka-u-sf.org](mailto:info@osaka-u-sf.org)

Osaka University, San Francisco Center

<http://www.osaka-u-sf.org>

# JUNBA

JAPANESE UNIVERSITY NETWORK IN THE BAY AREA

<http://www.jspsusa-sf.org/junba/>

## JUNBA 2009 -Next Step to a Greener Earth-

JUNBA will hold the annual event "JUNBA 2009" -Next Step to a Greener Earth-.

15 Japanese Universities will present their 24 exhibitions at JUNBA Technology Fair. The details are as follows;

**DATE:** January 12(Mon) and 13(Tue), 2009

**VENUE:** Marriott San Francisco Airport (1800 Old Bayshore Highway, Burlingame, CA 94010)

**ORGANIZED BY:** Japanese University Network in the Bay Area; JUNBA

**CO-ORGANIZED BY:** Consulate General of Japan in San Francisco

JSPS (Japan Society for the Promotion of Science), JETRO San Francisco

**SUPPORTED BY:** Ministry of Education, Culture, Sports, Science and Technology of Japan

### Program Schedule (Proposal)

#### JUNBA Summit

Open meeting by presidents or executive directors of JUNBA member universities (in Japanese)

Date: January 12, 2009 (Mon)

Presentation and general discussion "Environmental efforts of JUNBA Member Universities"



#### JUNBA Symposium

Open Symposium (in English)

Date: January 13, 2009(Tue)



#### JUNBA Technology Fair

Exhibition and Oral Presentation  
(in English)

Date: January 13, 2009 (Tue)

JUNBA holds an annual technology fair with the above events, which features the latest trends of technology in Japan in specific fields.

Universities also exhibit presentation booths for their technologies and activities.



#### **SUBJECTS:**

1. Global Warming Countermeasure Technologies and Eco-friendly Energy Technologies (Low-carbonization Technology, Solar Energy Generation, Fuel Cell, Electric Vehicles, Energy Conservation Technology, etc.)
2. Technologies to Improve the Natural Environment (Environmental Improvement of Forests, Rivers and Oceans, Conservation of the Natural Environment, etc.)
3. Technologies which Solve Food Shortages and Food Contamination Problems
4. Technologies which Solve Global Medical Issues such as Infection, Disease, Pollution, etc.
5. Other Subjects Related to Environmental Problems (including Social Science)

## Interview with JSPS Fellow in the U.S.



### Dr. Ayako Yamaguchi

MS Department of Applied Life Science, Graduate School of Agriculture, Kyoto University, Japan, 2003

Ph. D Department of Botany, Graduate School of Science, Kyoto University, Japan, 2006

Postdoctoral Fellow at Kyoto University 2006

Postdoctoral Fellow at University of Pennsylvania 2007

JSPS Postdoctoral Fellow for Research Abroad at University of Pennsylvania 2008

Dr. Ayako Yamaguchi earned her Ph.D. from Kyoto University. She came to the University of Pennsylvania in January of 2007 as a postdoctoral fellow in Doris Wagner's lab. In 2008, she was granted the title of JSPS Postdoctoral Fellow for Research Abroad. She greatly appreciates this support because she has been able to explore her exciting findings from her first year.

Dr. Yamaguchi conducts research in the area of Plant Biology. Compared to animals, plants are restricted by their immobility: they have to remain their whole lives wherever they start to grow. To survive and succeed in reproduction, plants must monitor and adapt to their environment. Her research interest is to understand how sessile plants apply developmental programs to produce flowers with environmental cues.

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

I chose to pursue my research in the U.S. simply because I met my current supervisor relatively early in my career, back when I was a graduate student. Before graduate school, I had never considered researching in the U.S. I was really shy so I couldn't imagine living in a foreign country by myself. However, once I entered graduate school, I realized the importance of conducting research abroad through the influence of those

around me, such as my supervisor and other scientists in the lab. Then I met my current supervisor when she visited Japan to discuss her research. Her talk and research interest kept me fascinated, so after a while I decided to come to the University of Pennsylvania and work in her lab.

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

The biggest difference I've noticed so far is the way everyone manage time and money. In Japan, people usually stay in the lab until late at night. Here, people leave much earlier. Instead of staying late, everyone in the lab attempts to focus on their work and get things done efficiently. As for money, I have the impression that labs prefer to spend money on human resources, not on fancy instruments. We share several instruments with other labs in the department. I feel that this makes better use of limited funding and creates greater opportunities to hire postdocs and research assistants for each lab.

In addition to time and money, I want to mention that people in the lab speak more frankly with their supervisors, especially when it comes to science. My supervisor often asks students and postdocs in the lab to make comments on their drafts of grants and papers. I never did this before in Japan. Personally, I believe that students and postdocs educated in the U.S. seem very articulate in discussions. Now I understand how they grow and develop to be scientists with such a receptive environment.

The overall differences I noticed may also be the means to make the research environment of Japan more comfortable for the women in science.

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

I believe that nowadays, there are no substantial differences in the quality of science, especially in my research field. However, there are several advantages to working in the U.S. I've been able to meet scientists from all over the world. Conducting research with these individuals creates strong connections that last for life, which allows access to much more information than I could obtain simply in Japan. In addition, the decreasing language barrier is also a great benefit for me as I continue scientific research. I'm not "shy" anymore.

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

I hope I can continue my research and share my findings and experience with people in Japan.

As I mentioned before, due to recent research activity in Japan, it might not be necessary to conduct research abroad. But if you are wondering, I will recommend that you just try it. It is similar to performing a new experiment. Regardless of the results, you will gain a new and different perspective.



## Multi-fingered haptic interface robot: HIRO III

Kawasaki & Mouri Lab., Dept. of Human and Information Systems, Gifu University

Haptic interfaces that present force and tactile feeling are key devices in constructing virtual reality (VR) environments. We have developed a five-fingered haptic interface robot, HIRO III, consisting of a robot arm and a five-fingered haptic hand, as shown in Fig. 1. HIRO III can present force and tactile feeling to the five fingertips of the human hand. As of September 2008, the interface is available commercially through collaborative companies in Gifu Prefecture, Japan.

Our haptic interface has the following features: (a) HIRO III is the world's first haptic interface that can present three-dimensional directional forces at a human operator's five fingertips, (b) HIRO III consists of a 6 DOF arm and a 15 DOF hand, and its work space covers VR manipulation on the space of a desktop, (c) HIRO III is placed opposite to the human hand, and the haptic fingertips connect to the human fingertips through passive spherical joints fixed by permanent magnets, which means it is safe to use and involves no oppressive feeling for the user, (d) HIRO III allows object manipulation in VR with high realistic sensation by projecting stereoscopic vision on the operator's hand (Fig. 2).

The haptic interface HIRO III facilitates applications in various areas such as tele-manipulation of a humanoid robot, 3D CAD with tactile technology for manufacturing, diagnosis and transmission of an experienced operator's skill, palpation training in medical education, and medical tele-treatment and tele-care. The use of HIRO III dramatically increases the believability of the haptic experience.



Fig. 1 Five-fingered Haptic Interface Robot: HIRO III

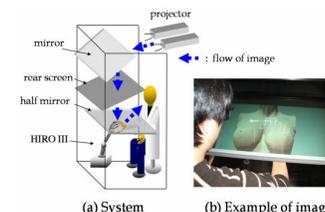


Fig. 2 3D display projecting the stereoscopic vision on the operator's hand.

Home page:

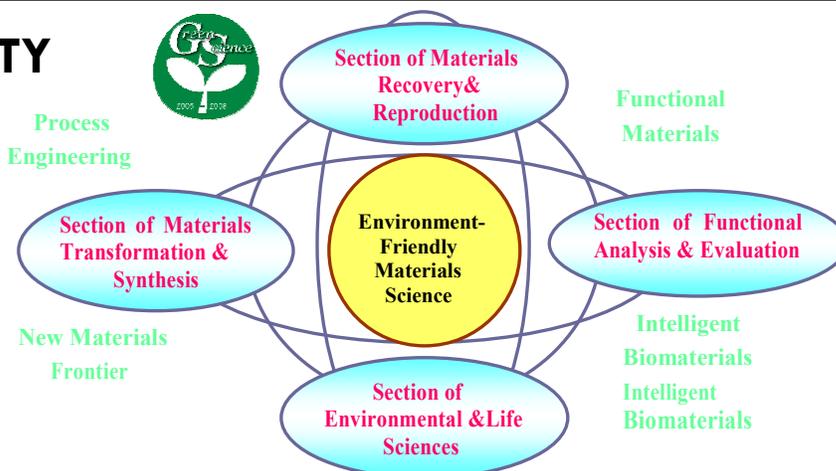
<http://robo.mech.gifu-u.ac.jp/en/>



Kochi University's "Special Research Project of 'Green Science': Development and Promotion of Environment-Friendly Materials Science"

From 2005 to 2008, Kochi University promotes "Special Research Project of 'Green Science': Development and Promotion of Environment-Friendly Materials Science" (Project leader: Prof. Hiyoshizo Kotsuki). The project consists of the following 4 sections: Materials Recovery & Reproduction, Materials Transformation & Synthesis, Functional Analysis & Evaluation, and Environmental & Life Sciences.

HP: <http://www.kochi-u.ac.jp/GS/>



Objectives:

- Promotion of highly organized joint research for the researchers who are attached to the Graduate Courses of Applied Science, Kuroshio Science, and Medicine.
- Construction of the dynamic educational / research network linking materials chemistry, hydrothermal chemistry, natural product chemistry, functional materials science, life sciences, and marine sciences.
- Development of a novel environment-friendly technology and invention of highly valuable functional and bio-functional materials.
- Construction of a new intellectual cluster called "New Materials Frontier".
- Promotion, increase, and internationalization of the educational and research activity in this university.
- Development of a strong relationship between this university and the local society.



Institute for the Physics and Mathematics of the Universe (IPMU) is a newly founded international research center on the Kashiwa campus of the University of Tokyo. The official language is English, and more than a half of full-time scientific staffs are non-Japanese in a year after the launch on Oct 1, 2008. It addresses basic questions about the universe, how it started, what it is made of, what laws govern it, what is its fate, and why we exist in it. We do so by the interdisciplinary collaboration among mathematicians, experimental physicists, theoretical physicists, and astronomers.

IPMU has strong ties to the Bay Area. Its director Hitoshi Murayama is from UC Berkeley and LBNL, and many from Berkeley have joint appointments. It is funded by the World Premier International Research Center Initiative of MEXT, Japan, at the level of approximately \$13M/year. It aims at gathering more than two hundred scientists from around the world. In terms of projects, IPMU is involved in the Super-Kamiokande experiment which discovered the neutrino mass; the KamLAND experiment that showed neutrinos oscillate; the XMASS experiment that aims at directly detecting dark matter in our galaxy; the HyperSuprimeCam project at Subaru telescope to build a 3D-map of dark matter in the universe and determine the nature of dark energy; and the Sloan Digital Sky Survey also addressing the dark energy.

We have fifteen to twenty positions available this year. We provide extensive help for non-Japanese appointees and visitors. The homepage is <http://www.ipmu.jp>

### **JSPS SF Office 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 news letter will be distributed to international sections in Japanese universities  
and subscribers in Bay Area.**

**As always, should you have any specific questions, or if you  
would like to be added to our mailing list, feel free to contact us at**

**[webmaster@jpsusa-sf.org](mailto:webmaster@jpsusa-sf.org).**

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[www.jpsusa-sf.org](http://www.jpsusa-sf.org)**