

## **JSPS San Francisco**

2001 Addison Street, Suite 260 Berkeley, CA 94704 USA

## **EVENTS OF FALL 2010**

# Symposium on "Borderlessness and Youth Culture in Modern Japan" held in Canada

From October 14<sup>th</sup>-16<sup>th</sup>, a symposium titled "Borderlessness and Youth Culture in Modern Japan" was held. It was presented as one of the events celebrating the 50th Anniversary of the Consulate General of Japan at Montreal and co-sponsored by McGill University, Concordia University, Université de Montréal and the Japan Society for the Promotion of Science.

Starting with opening remarks from Dr. Takeda, Director of JSPS San Francisco and Dr. David Ownby, Director of University of Montreal, this event included 4 sessions: "The Youth in Contemporary Japan", "Perspectives on The Youth Subculture of Japan", "Film Studies" and "The Japanese Youth in The Borderless World". Each included unique presentations with use of audio and visual tools by lecturers from both Japan and Canada. In addition to enjoying that, the audience listened to the lectures carefully while taking down notes. Among audience members were students who study Japanese or Asian culture so JSPS Staff had an opportunity to introduce JSPS Fellowships to them. On the second day of event, the presenters discussed about the lectures of the first day, such as capitalism in Japan, Japanese culture/literature and Japanese studies in North America in a vibrant discussion session.

JSPS SF hopes to continue to hold symposia to support Japanese researchers in international academic communication and cooperation .







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## **EVENTS OF FALL 2010**

#### The 15th Gathering of JSPS Japanese Fellows in New York

On October 29<sup>th</sup>, JSPS San Francisco held its 15<sup>th</sup> Gathering of JSPS Japanese Fellows residing in the US. The confab was attended by a total of 30 people, which included young Japanese researchers on JSPS Research Fellowships for Young Scientists and JSPS Postdoctoral Fellowships for Research Abroad. Joining the gathering were other Japanese researchers residing in

the U.S. along with the director of community relations at the Japanese Educational Institute of New York. Also attending were staffs from JSPS Tokyo headquarters and San Francisco Office.

San Francisco Office director Dr. Seishi Takeda opened the meeting, followed by a briefing from a member of JSPS's Research Fellowship Division on Research Fellowships for Young Scientists and Postdoctoral Fellowships for Research Abroad. Afterwards, the fellows introduced themselves and gave presentations on their research.

During the meeting, attending researchers from diverse fields enjoyed comparing notes on their various research activities and sharing stories and information on their lives in the U.S. All in all, the event more than achieved its objectives.



Adding to this success was the opportunity the meeting gave the young researchers to deepen exchanges with each other while organically building interpersonal networks. As the JSPS Office considers providing such periodical opportunities to be very meaningful, we will continue to do so in the future.

#### Visit to JSPS Japanese Fellows in New York

Staffs from JSPS Tokyo headquarters and San Francisco visited some JSPS Japanese Fellows in New York, Machiko Kanetake, New York University and Kouji Mineshima, New York University, along with the holding of the 15<sup>th</sup> Gathering of JSPS Japanese Fellows on the same day. We gained a greater understanding regarding a researcher's situation in the U.S. such as their financial support and research environment through seeing the research spaces and facilities of the campus. Also through interview them, we could gain useful information for better understanding JSPS Japanese Fellows.





#### **Visit to Yale University**

#### The Todai-Yale Initiative

The staff of JSPS San Francisco visited the office of The Todai-Yale Initiative at Yale University. The

office was established in September 2007 and some Professors, Associates and Assistants and researchers are working to promote academic exchange with Yale. We interviewed Dr. Sawako Shirahase and Dr. Yasuhiro Matsuda about their activities. We also had an opportunity to introduce some JSPS international programs to them. Moreover, we were able to talk with two graduate students from The University of Tokyo who conduct research at Yale University through the JSPS International Training Program (ITP).





In addition to the visit to The Todai-Yale Initiative, the staff of JSPS San Francisco inter-

#### Office of International Affairs

viewed Ms. Elizabeth Wilkinson, Assistant Director for International Initiatives, Office of International Affairs at Yale University. The interview was meaningful for us to get an image on how international offices at American universities function and to understand their perspectives of international students from Japan. After the interview, we explained about the JSPS Fellowships and Summer Program to her, and asked her to display some JSPS pamphlets in their office.

## **EVENTS OF FALL 2010**

#### Kabuki Symposium Held with University of Hawai'i Mānoa (UHM)

On November 13 & 14, a symposium and workshop titled "Kabuki: Negotiating Historical, Geographical, and Cultural Borders" was held. It was co-sponsored by The Center for Japanese Studies at University of Hawai'i at Mānoa and the Japan Society for the Promotion of Science, with support from the Consulate General of Japan in Honolulu. Starting with the opening remarks given by UHM Associate Prof. Julie lezzi, this full day symposium open to the public and half-day workshop for participants only, included presentations by four lecturers from Japanese universities and four lecturers from American universities. Highlights of this event included an address by Dr. James Brandon titled "Eighty-Seven Years of English Language Kabuki at the University of Hawai'i: 1924-2011", and a performance demonstration by students of Dr. Julie lezzi and Onoe Kikunobu, who are preparing for the spring production of Ise Ondo Koi no Netaba (The Vengeful Sword).





Julie A. Iezzi

# Comment from Dr. Julie Iezzi, Associate Professor of Theatre and Dance, UHM

How does a theatrical genre transform through time? Across political, social, or linguistic boundaries? On November 13-14, 2010, "Kabuki: Negotiating Historical, Geographical and Cultural Borders" at the University of Hawai'i at Mānoa (UHM), brought nine scholars from the U.S. and Japan together to explore such questions. Co-sponsored by JSPS San Francisco Office and the UHM Center for Japanese Studies, the symposium was an integral part of the yearlong celebration of the 87-year tradition of Hawai'i Kabuki.

Dr. Akama Ryo (Ritsumeikan University) began the "Negotiating Borders Within Japan" panel with an overview of the various Edo Era urban and rural spheres of kabuki, considering interactions among them, and giving particular focus to Edo and Kamigata exchanges. Dr. Noriko Yasuda (Gifu Shotoku Gakuen University) discussed the genesis and importance of touring and rural kabuki traditions (*jishibai*), some of which still remain vibrant today. Dr. Ryoko Matsuba (Ritsumeikan University) scrutinized 18<sup>th</sup> century woodblock prints of Yoshiwara courtesan kabuki (*niwaka*), uncovering unexpected border crossings among publishers, musicians, patrons and courtesans. Dr. Bunkichi Yasuda (Nanzan University) showed how an annual student-acted production of a classic kabuki scene from *Shiranami Gonin Otoko*, has effectively made traditional culture tangible for contemporary Japanese students in his Japanese Culture Seminar.

In the "Practical Negotiations" panel, Toshimi Tanaka (Costume designer) demonstrated possibilities for costuming a kabuki on a small budget and adapting traditional kimono for American-sized actors. Dr. Julie A. Iezzi and Onoe Kikunobu (UHM) lead students in a demonstration of vocal and movement training processes undertaken in preparation for the April 2011 English-language production of the kabuki, *Ise Ondo Koi no Netaba* (The Vengeful Sword).

## **EVENTS OF FALL 2010**

Dr. James R. Brandon (UHM, emeritus) began the "Negotiating Borders Outside of Japan" panel by examining the oldest kabuki tradition outside Japan—Hawai'i Kabuki—from its roots as local Japanese undergraduate student organization, through development into internationally recognized program. Dr. Laurence Kominz (Portland State University) shared stories of the various challenges he faces in mounting kabuki productions at several colleges in Oregon, including his recent production of Mishima Yukio's, *The Sardine Seller*. Professor David Furumoto (University of Wisconsin-Madison) discussed his traditional kabuki productions at Madison, including *Narukami*, the Thunder God, and the core importance of maintaining the integrity of the art form.

The symposium made clear many direct links connecting large-scale Edo era kabuki to Meiji era regional and touring troupes, and on to Hawai'i, which benefited from early touring companies venturing outside of Japan and fostered its own kabuki tradition. This in turn has both direct and indirect links to newer and growing mainland kabuki traditions. Specifics of financial and production roadblocks, or societal acceptance among the powers that be—whether *bakufu* or university—may vary, but the types of challenges faced by all these traditions through time and across geographic boundaries are remarkably similar. And while definitions of "kabuki" may vary depending on who you are or where you stand, the desire to maintain its integrity remains constant.

Julie A. Iezzi University of Hawai'i at Mānoa Dept. of Theatre and Dance

#### The 5th Meeting for University Administration Officers in the U.S.

JSPS San Francisco held the 5th meeting for university administration officers in the U.S. on December 2nd. Its purpose is to exchange information and establish a network between administration officers from Japanese universities, which are based around the San Francisco Bay area. Participants included staff from Osaka University, Kyushu University, Tokyo University of Science, High Energy Accelerator Research Organization, Ministry of Education, Culture, Sports, Science and Technology (MEXT) who joined the meeting as LEAP (Long-term Educational Administrators Program for International Exchange), and JSPS San Francisco. Participants briefly introduced themselves and exchanged opinions. We'd like to continue meetings like this in order to gain a deeper understanding of each other's offices, work, and experiences in the U.S.



## THE OFFICE STAFF SWITCH

**JSPS San Francisco Welcome a New Member** 

#### Hiroshi Kajino, Deputy Director of Tokyo University of Science San Francisco Office



Hiroshi Kajino is the 4th deputy chief of the Tokyo University of Science (TUS) San Francisco office. He has worked for TUS for 17 years prior to working at the San Francisco office. Working his way up through several different positions within TUS, his last workplace was the Office of Administrative Information System. This is the 3rd time for him to live in a foreign country. He may have tasks in which he can put his experiences abroad to good use. During his stay, he hopes to create the basis of a relationship between TUS and its alumni in the Bay Area. In addition, he coordinates and supports TUS exchange students at UC Davis and develops networks with companies and universities. His major concern at present is about the differences in university administration between the U.S. and Japan. He has many chances to acquire knowledge about it, because UC Berkeley is near our office. He also looks forward to enjoying life in Berkeley.

## VISIT TO THE UNIVERSITY IN THE BAY AREA

#### JSPS Advisor interviewed Dr. Thomas C. Dalton at CSUEB

#### What can Universities do for the Communities?

On October 1, Tsuyoshi Yamamoto, our Advisor and Ai Furushima, our Program Coordinator visited California State University East Bay(CSUEB) to talk with Dr. Thomas C. Dalton about the Gateways Regional Alliance which is sponsored by Cal State East Bay.

Gateways Cradle to Career Education and Workforce Partnership (Gateways Partnership) creates a region-wide partnership to support a cradle to career education and workforce partnership that improves student achievement, increases teacher effectiveness and promotes the increased production of graduates with STEM (Science, Technology, Engineering and Mathematics) degrees. (See website at: http://www20.csueastbay.edu/gateways/index.html) CSUEB has been selected as one of four nationwide demonstration sites and was funded by Living Cities (http://www.livingcities.org/), a consortium of U. S. corporations and foundations, in 2008 for \$1million. Additional sources of funding from local foundations and corporations will be provided to sustain the project for the longer term.



"STEM education in the U.S., and especially, in the State of California faces a difficult challenge in producing enough graduates with STEM degrees to meet the increasing demand for high skilled workers in the San Francisco Bay Area.," Dr. Dalton said. "The United States is facing a crisis due to the fact that it is not producing enough STEM professionals to remain economically competitive in the global marketplace. Especially in California, with an economy highly dependent on the high tech sector, these problems are even more extreme."

According to Dr. Dalton, The California Council on Science and Technology reported that in the year 2000, the demand in California for workers with science and engineering B.A. degrees was 34,000, although only 20,000 science and engineering B.A. degrees were granted by California universities that year.

Besides, many of the teachers in K-12 school are not adequately trained in the STEM disciplines, although students' experience with science and mathematics plays a key role in influencing whether students pursue a STEM university degree. Some statistics elucidate the seriousness of this problem.

For example, a certain statistic tells us that in 2002-03, teachers who have a teaching credential in an unrelated subject area or no credential at all taught 25% of math, 22% of life science and 30% of physical science classes in California high schools. And, another statistic shows that the 19,600 students who graduated with a science and engineering degree in 2007 represent only 4% of the whole number, 482,300 when they were in the 9th grade.

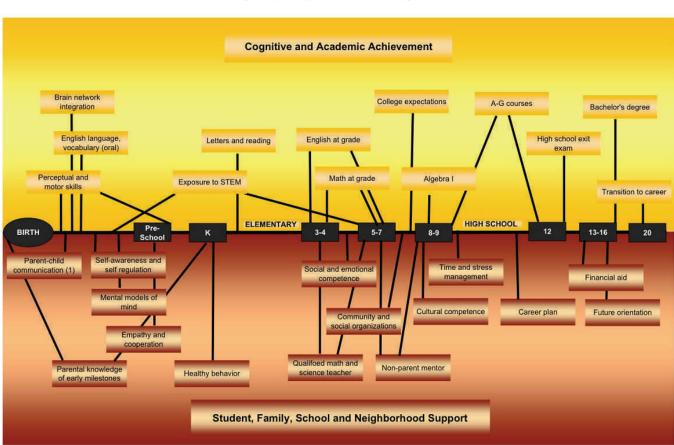
To improve this situation, CSUEB's Gateways Partnership is pursuing the following goals:

- Establish deep ties with local K-12 school districts and schools
- Expand collaboration with community colleges
- Develop partnerships with local industry, community, and philanthropic organizations to coordinate and better integrate services
- Implement an evidence-based, data driven continuous improvement process that will sustain change over time.
- Build new pathways into mathematics and science teaching and increase comprehensive recruitment efforts
- Target underserved populations in the communities

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Gateways Partnership, a truly regional alliance, has assembled an impressive group of partners that include representatives from education, civic organizations, major corporations, foundations and community-based organizations. For example, it includes the superintendents of three county offices of education, the Bay Area Council, the East Bay Economic Development Alliance, Silicon Valley Leadership Group, Cisco Systems, AT&T, Chevron, Bank of America, the East Bay Community Foundation, and so on.

Gateways partners with county and school district superintendents through federal grants that focus on better teacher preparation in mathematics, better K-12 student performance in science and math and helps more community college student transfer to the university to major in math and science, among many other projects. Gateways employs an evidence-based, data driven, continuous improvement roadmap that focuses on key transitions in child development from birth to college graduation. The roadmap guides networks of service providers to better coordinate and integrate programs that facilitate the successful educational transitions through a series of cognitive and social-emotional milestones along the P-20 (Preschool through college graduation) pathway.



Cal State East Bay
Gateways Roadmap to Success: Key Milestones

Gateways has created a governance structure, adopted a mission and goals, and created a roadmap of key milestones in each student's education. Task forces have also been formed in Math Teacher Professional Development, STEM education and Early Childhood Education and Social Preparedness that is Networks of service providers will be formed for the continuous improvement of programs in math professional development, early childhood education and STEM education. In addition, a regional report to the community will be published soon, which provides baseline data on student performance in Alameda, Contra Costa and Santa Clara Counties. This baseline data will enable Gateways to establish benchmarks for improving student performance and increasing teacher effectiveness throughout the P-20 pathway.

The Gateways Partnership just started in 2008, and it will take a while to improve educational performance in the region. We hope it will work well and hope that there will be a lot of students who pursue STEM degrees and that more teachers will acquire a STEM foundation as well.

Learning about the Gateways Partnership was a really good opportunity to think about the social contribution that universities can make to their communities in fulfilling their role of regional stewards.

In Japan, according to the survey by the National Institute for Educational Policy Research (NIEP), the ratio of students who like math or science tends to decrease as the grade goes up. And another report by Japan Science and Technology Agency (JST) discovered that half of the elementary school teachers feel that they are not so good at teaching science. Japan's ranking in Mathematical Literacy is 9th, and Science Literacy is 5th out of 65 countries and regions in a 2009 survey by the Programme for International Student Assessment (PISA). Compared with the results of 2006, they improved slightly, but both of them are still lower than that of 2000.

In this situation, what can Japanese universities or Japanese researchers do for their communities, especially to improve STEM education?

How can they contribute to society?



Thomas C. Dalton, Ph.D.

Special Consultant

Office of President

Office of Provost and Vice President for Academic Affairs

and Gateways Partnership

Dr. Dalton wrote the planning grant in 2008 to implement the Living Cities funded Gateways Regional Alliance. Dr. Dalton also edited *Educational Strategies for Meeting the East Bay Areas Workforce Needs* that summarizes the findings of 11 Education and Workforce Roundtables cosponsored by Cal State East Bay and several civic and corporate sponsors in 2007-2008. He is the author of several books that include *Early Experience, the Brain and Consciousness*, published by Erlbaum/Taylor & Francis, 2007. Dr. Dalton also has been a Visiting Fellow at the Neurosciences Institute since 1999.

#### 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.

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 <a href="webmaster@jspsusa-sf.org">webmaster@jspsusa-sf.org</a>.

Check out our website! www.jspsusa-sf.org

#### **Obirin Gakuen Opens North America Office**



On November 4, 2010, J. F. Oberlin University (JFOU) celebrated the launching of its North America Office with its first full Board meeting followed by a reception for forty friends, affiliates, and community members at the home of Dr. Earl and Norma Fogelberg in Pacific Heights. San Francisco State awarded Toyoshi Satow, JFOU's president, a special crystal plaque of San Francisco to welcome the new Foundation to the Bay Area.



J. F. Oberlin University President Toyoshi Satow and Deputy Consul General Michio Harada with Executive Director Maria Domoto in the background.

Hildy Heath of San Francisco State presenting
President Satow with a crystal plaque of San Francisco.
From the left: Duarte Silva, Stanford;
Ryoichi Kuboi, Osaka University;
Tsuyoshi Yamamoto, MEXT; Koichiro Aoshima, SFSU;
Bruce Darling, UC System; Hildy Heath, SFSU;
Maria Domoto, OGFA; Toyoshi Satow, JFOU.



#### Mission:

J. F. Oberlin University in Machida, a suburb of Tokyo, is committed to nurturing in students a wide range of knowledge, the ability to make ethical decisions, an international perspective, and a dedication to making contributions to individuals and society, especially towards those in need. Our students are encouraged to develop a deep appreciation of their own culture and history as well as empathy for the traditions and viewpoints of other nations.

#### **History:**

JFOU traces its origins to the school founded by Yasuzo Shimizu in Beijing in 1921 to educate Chinese girls so that they could rise out of poverty. Today the university in Japan serves approximately 9,000 students. It has four undergraduate colleges (Liberal Arts, Business Management, Health and Welfare, and Performing and Visual Arts) and a Graduate Division with programs in International Studies, Language Education, Higher Education Administration, Business Administration, Psychology, and Gerontology.



J. F. Oberlin University campus in Machida, Tokyo, Japan.

#### JFOU Overseas Activities:

JFOU currently sends about 500 students abroad each year on study abroad programs including: (1) the GO program for freshmen and sophomores who study a foreign language at an overseas university and experience foreign culture for a semester; (2) short-term spring and summer school programs; (3) traditional sophomore or junior year abroad programs; (4) a double degree program with San Francisco State University, and (5) a flight operations program for commercial pilots in New Zealand and an airline hospitality program in Canada. The North America Office will add to these endeavors with internships, special programs for particular majors such as social work, early childhood global business, and sports management, and volunteer opportunities particularly in the Bay Area and in underserved communities, such as native American reservations in Oklahoma.

#### The North America Office:

Founded in 2010, Obirin Gakuen Foundation of America (OGFA) is an independent 501(c)(3) California non-profit organization with tax-exempt status. We are located in San Mateo just south of San Francisco. Our mission is to create and administer programs for Japanese and other Pacific Rim students to study, intern, or volunteer in North America and to encourage more American students to participate in study abroad programs in Japan. For students unable to travel for extended periods of time, we hope to establish digital forums, distance learning, and arts and culture exchanges. In addition, we serve as the fulcrum of activities for JFOU alumni and other friends of our school. We look forward to collaborating with other JUNBA schools in the Bay Area to create more diverse programs for all students to develop a mutual understanding of other cultures.

#### **Executive Director:**

In the 1980s, Dr. Maria Domoto taught at JFOU where she established the intensive English program, outbound junior year abroad program and the inbound Reconnaissance Japan program for international students. She then taught at UNC Charlotte where she designed their Japanese language program as well as the area K-12 Japanese program and also established bilateral exchange programs with JFOU. In addition, she founded and administered a Japan-America Society. Since leaving UNC Charlotte, she has been working on grass-roots exchange projects funded by the Japan Foundation and consulted with the National Association of Japan-America Societies.



In front of the San Mateo office in September 2010.

From left: Bruce Batten, OGFA Vice-Chair and JFOU Vice-President for International Affairs; Maria Domoto, OGFA Executive Director; Toyoshi Satow, OGFA Chair and JFOU President; Hiroaki Hatayama, OGFA CFO and JFOU Vice-President for Strategic Planning.

Contact: **office@obirin-gakuen.org** Website: **www.obirin-gakuen.org** 



# Obirin Gakuen Foundation Board Back: John Hawkins, East-West Center, HI; Hiroaki Ebihara, Yonex USA, CA; Carl Jacobson, Oberlin Shansi, OH; Middle: Norma Fogelberg, Non-Profit Consultant, CA; Bruce Batten, JFOU, Tokyo; Hiroaki Hatayama, JFOU, Tokyo; Front: Maria Domoto, OGFA, CA; Toyoshi Satow, JFOU, Tokyo.



#### Nara Institute of Science and Technology (NAIST)

## ABIC 2010 Exhibition For Technology Transferring

The Graduate School, Nara Institute of Science and Technology (NAIST), is working on its mission to promote advanced scientific and technological research, and to deliver its research achievements through technology transfer to industry, thereby contributing to industrial growth and development.

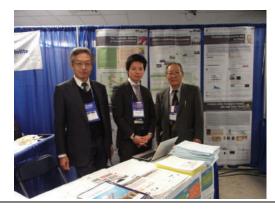
As part of our activities, we participated in Agricultural Biotechnology International Conference (ABIC) 2010 from September 12th to 15th in Saskatchewan Canada to promote our research achievement in Agri-Bio fields worldwide and to expedite licensing for joint research or material transfer with foreign companies and universities.

ABIC is run by ABIC Foundation, a non-profit organization in Canada. The vice president of NAIST is one of the advisory commission members.

We presented research achievements in 'Production of Hyaluronic acid by Plants', 'Florigen: A flowering-promotion molecule', 'The enhancement of plant productivity' and 'Effective transgene expression system under abiotic stresses'. On top of our presentations, we had a private interview with a multinational seeds company to introduce our research topics which lead to a mutual agreement for sharing information on research progresses and continuous relationship.

Discussions about a possible collaboration with Enterprise Saskatchewan, a support organization of Saskatchewan based businesses, have promoted cooperation between Enterprise Saskatchewan and NAIST.





#### The University of Tokushima

## Introduction to the Double Degree Program at The University of Tokushima

The Graduate School of Advanced Technology and Sciences (GSATS) offers a Global Double-Degree Program (GDDP) and a Short-term study abroad program, both of which are financially supported by MEXT (Ministry of Education, Culture, Sports, Science and Technology, Japan); the Center for International Coop-

eration in Engineering Education (CICEE) works together with both the GSATS and the Faculty of Engineering to provide administrative support.

#### The Global Double Degree Program (GDDP)

The GDDP includes a wide range of courses, intended to provide a broad understanding of the entire field of engineering. The GDDP emphasizes three fields of engineering: nanotechnology, bio-information, and environmental. Twenty-one students were enrolled in the program in 2009 and nineteen students in 2010. Since the beginning of the GDDP in 2006, the total number of students who have applied to enter the program is about sixty. The GDDP allows engineering graduate students to obtain two graduate degrees. One degree is from The University of Tokushima (UT), the other is awarded by an international partner, or "affiliate," university of UT. Through the GDDP, students from The University of Tokushima, as well as foreign students from partner universities, will study and complete degree requirements from two universities, UT in Japan and an International



International Double Degree students at The University of Tokushima

Affiliate of UT. The GDDP is a joint project between The University of Tokushima and its twelve international partner institutions: Florida Atlantic University in the USA; The University of Auckland in New Zealand; INSA Toulouse in France, Kyungpook National University and Korea Maritime University, and Dongeui University in Korea; Harbin Institute of Technology, Tongji University, Beijing University of Posts and Communications, Xian Jiaotong University, and Dalian Institute of Technology in China; and Southern Taiwan University, in Taiwan.



Field Trip to Akashi Bridge



An inter-cultural party

#### Short term-study abroad programs

The GSATS in association with CICEE also offers short term study abroad programs. A short term program is typically designed for 2 to 3 weeks. These programs are especially useful for the undergraduate, or graduate student, who wants to study in an international academic atmosphere to receive technical training. These programs allow graduate students from The University of Tokushima to visit partner universities. The program also allows foreign students to visit The University of Tokushima for short durations. Partial financial assistance, which covers the costs of travel and living expenses, is provided. Fourteen students participated in these programs in 2010.

#### Contact:

Center for International Cooperation in Engineering Education (CICEE), The University of Tokushima, 2-1 Minamijosanjima-cho, Tokushima 770-8506 Japan.
Telephone and fax: +81 88 656 7643



#### **Hirosaki University**



## North Japan Research Institute for Sustainable Energy (NJRISE)

Hirosaki University of Japan established North Japan Research Institute for Sustainable Energy (NJRISE) on the first of October, 2010. The NJRISE is located in a cold region which has a high heat demand for heating and snow-melting, etc. On the other hand, there exist rich renewable energy resources in the region such as geo-thermal heat, wind energy and biomass.

To meet the energy demand in cold regions, R&D is under way on fuel cell co-generation systems utilizing gasified fuels produced from the biomass in the region. We are also planning to develop heat utilization systems with geothermal heat and hot spring power generation systems. Furthermore, R&D will be done on innovative technologies for advanced low-carbon & low-cost EV for snowy cold regions having safe and comfortable driving systems with sufficient heating ability and long driving range.

Another prioritized research theme is the development of an inexpensive and highly efficient process of direct deoxidization of silica sand to produce solar grade silicon (SOG-Si). This is one of the key technologies of the "Sahara solar breeder project" composed of two systems: (1) PV (photovoltaic) plants to make

SOG-Si and solar cells using resources such as silica sand and solar power in the desert and (2) global superconducting cable networks to carry electric power from the PV plants.

It is also an important role of NJRISE to transfer the developed technologies to local industries. Two products have recently been commercialized: a snow-melting system using geothermal heat without a heat pump and a beacon light system with a rotation flow type "Flash Wind" power generation. The NJRISE is about to start a demonstration experiment in Rokkasho Village, Aomori Prefecture. It is focusing on ICT (Information and Communication Technology) to be applied to the electric power network such as a

smart grid. Through these activities introduced here, the NJRISE will contribute to realizing a low carbon sustainable society.



North Japan Research Institute for Sustainable Energy (NJRISE), Hirosaki University



#### **Toyohashi University of Technology**



#### Birth of EIIRIS: Toyohashi Tech's Flagship International Research Institute

FIIRIS

Toyohashi University of Technology launches its international research complex— Electronics Inspired Interdisciplinary Research Institute (EIIRIS)

On 1st October 2010, Toyohashi University of Technology (Toyohashi Tech) launched its first ever research institute—EIIRIS, the Electronics-Inspired Interdisciplinary Research Institute. Toyohashi Tech researchers are internationally acknowledged for their contributions to electronics including sensor microchips and ultra-high capacity memory devices. Research at EIIRIS fuses the university's historical excellence in electronics with neuroscience, medical diagnostics, agriculture, and information communication technology.

EIIRIS consists of the following departments and managers: Advanced Medical Technology (Mitsuteru Inoue), Brain Technology (Makoto Ishida), Green Technology (Akira Hiraishi) and Research and Human Resources Support-Platform (Adarsh Sandhu). Importantly, previously established research centers, including the 'LSI Fabrication Line' housed in the Venture Business Laboratory (VBL) have been integrated into the new EIIRIS research complex.

EIIRIS consists of the new 1500 m<sup>2</sup> dedicated building connected to the adjacent 2300 m<sup>2</sup> VBL via a corridor on the third floor between the buildings.

EIIRIS puts Toyohashi Tech on the world stage as a center for pursuing world-class interdisciplinary research on topics including implantable device for recovering sensory/motion function for intractable disease persons, brain-machine-interface, ultra high-speed massive storage/information-processing/ 3D-displays for medicine, and sustainable food production system using multimodal sensors.

Toyohashi Tech welcomes scientists and engineers to join researchers at EIIRIS create new paradigms based on electronics-inspired interdisciplinary research.

Toyohashi Tech is located at the heart of Toyohashi, a city in eastern Aichi Prefecture, within easy reach of Nagoya, Tokyo, Osaka, and Kyoto by Shinkansen.

Toyohashi University of Technology: http://www.tut.ac.jp/english/

EIIRIS: http://www.eiiris.tut.ac.jp/

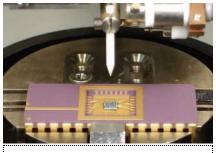
Toyohashi Tech e-Newsletter: http://www.tut.ac.jp/english/newsletter/index.html



The new EIIRIS building completed in October 2010



Unique 'LSI Fabrication Line' at EIIRIS



LSI chip fabricated at Toyohashi Tech



JUNBA 2011 -Global Adaptability of Japanese Universities-

This event has ended. Thank you.

http://www.junba.org/junba2011.html

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



#### Mr. Katsuhide FUJITA

2008: B.S., Department of Computer Science, Nagoya Institute of Technology

2010: M.S., School of Techno-Business Administration, Nagoya Institute of Technology

2010 - present: Ph.D. Candidate, Department of Computer Science and Engineering, Nagoya Institute of Technology

2010 - present: Sloan School of Management, Massachusetts Institute of Technology

2010 - present: JSPS Research Fellow (DC1)

Katsuhide Fujita has been interested in Artificial Intelligence (AI), especially collaboration and coordination techniques among intelligent software. These techniques have been applied to robots, WWW (the World Wide Web) and ecommerce in real life. This field is an interdisciplinary study between computer science and mathematical economics. Recently, he focused on the automated negotiation protocol between software agents with highly complex situations. In the automated negotiation protocol, the computational complexity in the negotiation protocol is an important topic. He is currently studying a model and an algorithm for making agreements among intelligent automated software at Massachusetts Institute of Technology.

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

First, high-level universities in the U.S. have a lot of famous researchers in the computer science field. For instance, all of the professors at Harvard University and MIT are known as leading researchers all over the world. We can join some open seminars presented by famous researchers and get some knowledge from these seminars.

Second, most of the researchers in the U.S. are energized and motivated. Many ambitious researchers gather from around the world in order to achieve better results here. They study about their original topics in order to accomplish their goals.

Finally, the technologies of computer science, especially AI in the U.S., is ahead compared to Japan and elsewhere. MIT has some great laboratories such as Media Lab and CSAIL (MIT Computer Science and Artificial Intelligence Laboratory). I believe that I will be able to grow professionally by staying at MIT.

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

Researchers in the U.S. are very interactive inside and outside of the laboratory. They express an opinion without hesitating in some meetings and try to improve their research by collaborating with other researchers. In addition, they try to generate new connections outside of their laboratory. For example, some researchers come to our laboratory from outside of MIT to exchange their opinions about their research topics every day.

students, researchers and professors gather here from all over the world. Therefore, we sometimes chat about the difference between cultures or lifestyles. Since there are fewer foreigners in my laboratory in Japan, we don't have as cluding myself, researchers should go many opportunities to talk about the differences between countries.

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

First, the communication and collaboration among researchers is very frequent. We can join seminars freely, and get some

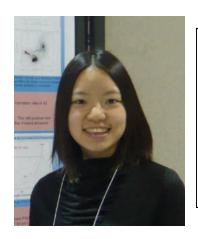
great advice from many great researchers easily. We also can make new connections among great research communities by jumping into other laboratories in the U.S. Second, the research topics at high-level universities in the U.S. are very significant and will be the main topics in our field in the near future. We can get new ideas from their research topics. Finally, we can improve our English by staying in the U.S. For researchers, English is necessary because we have to write papers or give presentations in English. In the U.S., we can find a lot of great English schools and have enough opportunities to improve our English.

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

My dream is to become a great re-Another difference is that most of the searcher in the AI field who is active internationally in the future. The goal of my studies is to analyze some unsolved issues, develop the AI field and generate something new with high practicality.

> I believe that for young researchers inabroad for widening their vision and getting good communication skills in English. We may need to go through some extra effort because of some cultural shocks in lifestyle or language at the beginning. However, these experiences provide some opportunities to grow and get a new perspective in our research field. We may start some new collaborations with other researchers if we go outside of our laboratory.

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



#### Ms. Hange INAMI

2007: B.S., Physics, Meiji University

2007-present: Ph.D. Candidate, Space and Astronautical Science, The Graduate University for Ad-

vanced Studies (Sokendai)

2009-present: JSPS Research Fellow (DC1)

2010-present: The Excellent Young Researcher Overseas Visit Program of JSPS

2008-present: Visiting graduate student at Spitzer Science Center, California Institute of Technology

Hanae INAMI studies galaxy interac- extremely hard, although at the same tion induced starbursts and active galac- time, they enjoy their life very much tic nuclei in infrared luminous galaxies in because they work efficiently. Some the local Universe. She is mainly using people use lunch hour to go to the camthe AKARI Infrared Astronomy Satellite pus gym, work hard on weekdays but and the Spitzer Space Telescope, in addition to using X-ray, ultraviolet, and optical space observatories to unveil the that there are more social gatherings, nature of these galaxies. She is currently visiting the Spitzer Science Center at the time than in my home institute in Japan. California Institute of Technology (Caltech).

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

First of all, the principal investigator (PI) of the project that I am involved in is at Caltech in the U.S. Therefore, visiting the U.S. has easily overcome many issues such as the time difference between Japan and the U.S. and limited face-to-face meetings. It has been very helpful working with my American advisor locally here. Second, because most of my collaborators are at Caltech, being here has allowed me to discuss many kinds of related topics with them directly. Third, Caltech is certainly one of the largest astronomical communities in the world. I have met many interesting astronomers here.

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

I feel that at Caltech, everybody works

have a relaxing time on weekends.

Another thing that I have noticed is for instance, parties, donuts, or coffee

In general, I have the impression that people are much more assertive. This is not only with respect to American researchers but also foreigners. You need to express your own opinions clearly. Nobody expects that other people will try to read your mind deeply, like in Ja-

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

It is much easier to talk with the PI (my U.S. supervisor) and the other collaborators. This really helps me to advance in my research. Also, my American advisor has been giving me a lot of experience that I could not have had if I was in Japan. This is really "treasure time" for me.

Because Caltech is one of the largest institutes of astronomy, they not only have many local astronomers, but also there are a large number of visiting astronomers. So there are many talks, e.g. colloquiums, nearly everyday on the campus. This is an ideal environment for meeting other researchers and expanding one's knowledge.

We have a weekly meeting, and I have to present what I have done in that week, obviously in English. This is very good practice for me to learn how to give a good short talk. As a result, I am much more confident with my English ability compared to when I had just arrived in the U.S. This is very crucial because giving a presentation is one of the most important techniques for showing your achievements.

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

I would like to reveal the evolution of the Universe from its beginning to now. I first want to understand the local Universe carefully, and then I plan to project this knowledge back to explain the physics of much earlier times.

I also hope that I can act as a bridge between the astronomical societies of different countries, since I grew up in Taiwan and Japan and I am now studying in the U.S.

Living in another country really expands one's view of the world. I think that the key is not just going abroad, but also interacting with people who are very different than you or your friends and have a very different cultural background. At first, leaving the place that you are familiar with is really tough, but I believe that you will soon notice a fascinating new world right in front of you. One should always keep progressing!

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



#### Mr. Yutaka SHIKANO

2007: B.S., Faculty of Science, Tokyo Institute of Technology

2007: Certification, Joint Course of Mathematical Economics, Tokyo Institute of Technology and Hitotsubashi University

2009: Visiting Scholar, Perimeter Institute for Theoretical Physics

2009: M.S., Department of Physics, Graduate School of Science, Tokyo Institute of Technology

2009 - present: Ph. D candidate, Department of Physics, Graduate School of Science, Tokyo Institute of Technology

2009 - 2012: JSPS Research Fellow (DC1)

2009 - present: Visiting Student, Department of Mechanical Engineering, Massachusetts Institute of Technology

2009 - 2011: the Excellent Young Researcher Overseas Visit Program of JSPS

Yutaka SHIKANO has been studying how to understand "time" in Nature and describe its concept. To address this most challenging question, he moved from Tokyo Institute of Technology (Tokyo Tech) to Massachusetts Institute of Technology (If it were up to me, MIT would be changed to Mass Tech, like Tokyo Tech) where he works in the Quantum Information Science Group at the Department of Mechanical Engineering. This is because his current focused question is how to understand the quantum speedup mechanism in quantum mechanics, especially quantum computation. However, his background is actually in theoretical physics.

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

The reason I chose the U.S. to do my research is quite simple. I could get the opportunity to stay at MIT for a year and a half. My story about how I came to MIT is as follows: When Professor Seth Lloyd, who is my host researcher at MIT, visited Tokyo Tech a couple of years ago as a visiting professor for a couple months, I helped him and his family and discussed the quantum clock with him. On the last day of his stay, we went to a French restaurant called "Kitchen Hayashi" located near Oh-Okayama train station with his wife, who is working on Japanese literature at Wellesley College, and Akio Hosoya, who is my supervisor at Tokyo Tech. I received an offer to visit MIT from him on the condition that I can get the financial support. Thereafter, my application to JSPS fellowship (DC1) was successful, so here I am at MIT now.

#### What is your impression of the research environment And do you have any advice in the U.S.? How is it different from your lab in Japan?

While I am not sure that other universities in the U.S. can be directly applied to my experiences at MIT, at least at MIT, I feel like the greatest difference to Japanese universities is the supporting staff. First of all, the number of the supporting staff is much greater than Japanese universities. The quality of the supporting staff is much higher than in Japan. For example, some of the supporting staff have a Ph.D, that is, professional skills for each field. When I came to MIT, I became convinced that the research environment at MIT is supported by many high-quality supporting staff. I think that this difference directly shows up in their academic results. Due to their kind support, I can concentrate on my own research only. I wrote a similar article in Japanese to be published in the monthly newsletter of the Physical Society of Japan in January 2011. If you are interested, please read it.

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

I think that my stay at MIT has greatly improved my academic career. Most faculty here travel regularly to advertise our results around the world. This leads to the next career or academic position. In fact, personal relationship is so powerful for almost all researchers' academic career. I feel that it is these "invisible" relationships

that will produce great merit during my stay at MIT.

## Q4 What is your dream? about doing research abroad for young researchers?

My dream is that a society will be created where everyone promotes activities of their own interests around the world. Especially as my current research goal is to understand the concept of "time". The connection to my dream is based on the following questions. What did we do in the "past", how do we feel "now", and what should we do in the "future"? I always feel that the role of all academic fields is drastically changing "now" like the economical changes under "globalization". To understand the role of "time" in physics or Nature is connected to what we should do "now", in other words in Latin, "Carpe Diem". This phrase is my precept. I am always thankful for the great support from many collaborators, friends, staffs, and my family. It is my great pleasure to promote my research at MIT, where I have gained many fond memories. To pursue my dream, I vow to promote my "current" research projects everywhere. As for my advice to young researchers, you have to know the "current" situation. From this viewpoint, I think or believe that you can find the way to achieve your goal. Finally, I would like to acknowledge the JSPS newsletter from the JSPS San Francisco office to give me the opportunity to write this article and thank you for reading.