HOKKAIDO UNIVERSITY magazine 2012

A bumper
Sustainability
Weeks REVIEW
2011

In the BATTLE to fight cancer

A new advancement in high-precision radiotherapy

Close Neighbors:

Full engagement with a great northern "neighbor" Finland

Launching our new

First Step Program

24 Hokudai students kickstart their international careers

Faculty Profile: Veterinary Medicine

Photography competition
Win great prizes

Regular Event Listing much more

HOKKAIDC UNIVERSITY nagazine 2012

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Letter From the Editor

Hokkaido University is proud to bring you the 17th Edition of the Hokkaido University Magazine (formerly the Hokkaido University Newsletter.)

We are evolving in many ways apart from our rebranding. We are also going online! This will allow the magazine to communicate with its audiences more frequently as well as lessen the magazine's environmental impact.

The enhanced, online version intends to feature all the regular items as well as provide a more immediate look at student, faculty and alumni achievements and happenings.

Visit www.hokudai.ac.jp/en and take a look at the 2012 issue due for a Spring launch.

This print edition, which has an updated look, will continue to include important news of university events, programs and research; features on students, faculty and alumni; and news of alumni events. As we move online, we reduce our print edition schedule to once each year.

In this edition we feature an amazing world-first. Together with Shimadzu Corporation Hokkaido University has developed a new diagnostic technique which will have a dramatic effect in the fight against cancer. We also give a run-down of last year's Sustainability Weeks event, the biggest and best one yet.

'Jake Edge' explores the life of a successful systems engineer who first came to Hokkaido University as an exchange student then returned as a research and master's student. Now he works in I.T. at a very successful Japanese company here in Sapporo.

In 'Miss Nusrat's Feeling for Snow' we meet Nusrat Choudhury, a young woman from Bangladesh who has fallen in love with living in Sapporo and studying here at Hokkaido University.

On a less serious note, 'One Winters Day' by current student Harald Schaller takes a look at how people in different cultures deal with snow and transportation in a manga offering.

In this edition, we are also launching a regular photography competition which will serve to showcase the beauty and culture of the island of Hokkaido. Each edition will feature the winning photograph in a one page spread. To enter, you need to be a current student or researcher of the University.

We hope you enjoy reading this edition of the Hokkaido University Magazine, and we invite you to continue the conversations we have begun here. Send any comments to pr@oia.hokudai.ac.jp

Warren Pohl Editor, Hokkaido University Magazine

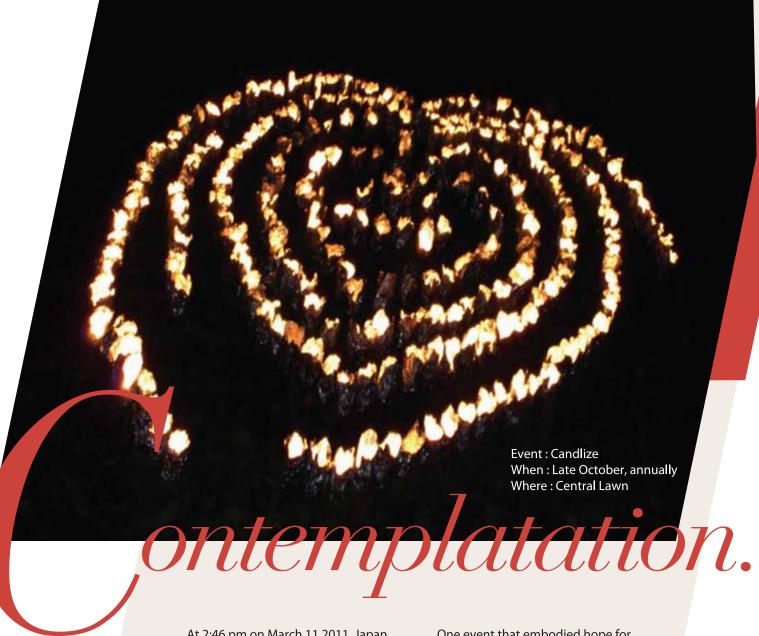
Hokkaido University is launching an official Twitter Feed in English planned for launch mid 2012. Follow us now!



- University News
- Special Lectures
- Event Notifications
- Competitions







At 2:46 pm on March 11 2011, Japan suffered the fury of mother-nature when a magnitude 9.0 earthquake hit the country, triggering the deadliest events here since Hiroshima and Nagasaki were leveled by atomic bombs during World War II.

Over one year has passed, but the mammoth task of rebuilding continues, as does the quiet healing process for communities not only within the battered northeast coast of the country but all over Japan, including here in Sapporo. 2011 was about reflecting for us here at Hokkaido University. We continue to support affected communities in their efforts to regain a sense of normality to their lives.

One event that embodied hope for change occurred on Sapporo campus on Sunday October 30 last year. This event, involving the lighting up of hundreds of recycled candles made from waste oil and placed over the Central Lawn allowed students to quietly contemplate the meaning of sustainability in a beautiful night setting.

This year, students formed a heart shape in the middle of the lawn, signifying their love and compassion for both the environment and environmental issues.

The event, now in its 2nd year, is growing in popularity and has become a permanent fixture of Hokkaido University's Sustainability Weeks Program.



Hokkaido University partners with Shimadzu Corporation to develop new tumor-tracking technology for use in radiotherapy.

Hokkaido University has partnered with Shimadzu Corporation to commercialize new real-time tumor-tracking technology being researched by Professor Hiroki Shirato and Professor Masayori Ishikawa of Hokkaido University for use in next-generation high-precision radiotherapy. This joint development program has now successfully produced a prototype system.

Used in combination with an X-ray cancer treatment system, the system being developed enables pinpointing radiation only at cancerous tissue, while avoiding normal tissue, even when treating areas of the trunk that do not maintain a constant position or shape in a body due to respiratory movement, such as the lungs and liver.

The group now plans to use the prototype to conduct various additional testing to further refine the system. Through Professor Shirato's involvement in a Super Cluster for Innovative Medical Treatment project (development of

minimal risk radiotherapy devices), and through the support of the Hokkaido Organization for Translational Research, an organization that helps translate research work to commercialization, the system is scheduled for commercialization within the 2012 fiscal year. After introducing the system domestically in Japanese markets, the group intends to release the system in international markets as well.

Hokkaido University and Shimadzu will continue to strive to produce concrete results from their ongoing joint academia-industry collaborations aimed at providing advanced medical technologies to clinicians as early as possible by translating basic research results developed at the university into products and technology usable in a wide range of clinical applications.

Current Status of Treating Cancers with Radiation

Radiotherapy is one of the three main methods used to treat cancers, along with surgery and anticancer drugs. Since radiotherapy treatment causes almost no pain and no loss in body function or form, it enables achieving both treatment and a social life. Therefore, there is considerable interest in radiotherapy as a way to treat cancer while maintaining a quality of life.

There are two types of radiotherapy, X-ray treatment and particle beam treatment. Currently, X-ray accounts for about 90% of treatment in Japan, with about 240,000 patients treated annually. X-ray treatment is popular overseas as well.

Though pinpoint irradiation can be used to treat tumors in areas that don't move, such as brain tumors, there has been significant need for technology that can locate and accurately irradiate, in real time, tumors in the trunk, such as the lungs and liver, which do not remain at a

constant position due to significant vertical movement of the chest or abdomen corresponding to the respiratory cycle (respiratory movement).

Overview of the New Real-Time Tumor-Tracking Technology

The new real-time tumor-tracking technology solves the problems described above, by inserting a 2mm gold marker in the vicinity of the tumor and using a CT scanner to determine the relationship between the marker and the center of the tumor. Next, X-ray fluoroscopy systems with pattern recognition technology are used from two directions to automatically identify the gold marker in the fluoroscopic images and repeatedly calculate its spatial position through each movement cycle. Then radiation is applied cyclically, only when the gold marker is within a few millimeters of the anticipated location.

For the first time in the world, it is now possible to precisely irradiate tumors that are moving within a body.

Consequently, this reduces the volume of irradiated tissue to 1/4 to 1/2 the volume of conventional methods used currently to irradiate the entire range of tumor movement resulting from the respiratory cycle, which enables significantly reducing the amount of normal tissue that is irradiated.

Previous Research by Hokkaido University

For over a half century, Hokkaido University has been developing technology for focusing radiation dosage at the tumor location, which is the most important aspect of radiotherapy. After successfully developing tumor-tracking technology that uses X-ray fluoroscopy to automatically locate a gold marker inserted near moving tumors, Professor Shirato of the Graduate School of Medicine have continued to produce additional results at the Hokkaido University Hospital since 1999 that have attracted attention from around the world.

Since 2006, Professor Ishikawa has been researching how to optimize the functionality of the system.

The New Real-Time Tumor-Tracking System under Development

The system determines the position of tumors in organs that move due to respiratory movement, or other causes in real time and instructs the X-ray treatment system when to emit or stop X-ray beam irradiation during treatment. The system consists of an X-ray tube, X-ray detector, X-ray high voltage generator, synchronization control system, and real-time tumor-tracking system.

Commercialization will result in compatibility with multiple markers and even more detailed information regarding tumor position, which will further increase the precision of pinpoint irradiation. Making additional improvements to the X-ray tube and X-ray detector supports will enable smoother tracking of moving tumor positions. In addition to a model with an image intensifier as the detector, a model with a flat panel detector is planned to be offered as well.

In the near future, the group aims to commercialize the system domestically in Japanese markets, then release the it in international markets as well.

By combining the outstanding technologies, expertise, and experience available respectively from Hokkaido University and Shimadzu to develop and popularize the system throughout the world, the group hopes to make a significant contribution to advanced radiation medicine and treatment, providing superior quality of life for cancer patients.

Below: Professor Shirato overseeing research and left and cover: the new tumor-tracking technology in action.



Sustainability Weeks

The Sustainability Weeks 2011 (SW) hosted by Hokkaido University saw the assembly of more than 6,000 researchers, educators, students, and citizens from home and abroad over a very fruitful two weeks in October last year. Knowledge sharing and discussions concerning the latest scientific knowledge in the form of symposiums, workshops and various exhibitions identified the next steps toward building a better future. Here is a wrap up of some of the events which took place.

Quick Facts SW 2011

Number of events : 47 Number of Website Hits : 39,116

(April 4- Nov 30 2011)

Number of Participants: 9,895 Including 260 from overseas

October 16

Advanced Technology and Management System for Health

Commemorating the establishment of the Department of Health Sciences in April 2011, this public seminar introduced approaches in utilizing advanced technology in medicine and highlighted research to evaluate mental health with brain activity measurement technology and remote health services using the internet.

October 22

Presentation & Debate Competition

For a more sustainable Sapporo, 15 teams of students presented their own transportation designs based on various modes of transportation, including bicycle, bus, taxi and even an underground waterway and faced off against their competitors in an exciting debate. After eight hours, first place went to a joint team of students from the Faculty of Engineering, the Graduate School of Veterinary Medicine and the School of Law.

October 24 - November 6 Velotaxi: Ride and Think for Sustainability

With the cooperation of Hokkaido Green Purchasing Network, Velotaxis, (eco-friendly cycle rickshaws) were available for use on Sapporo Campus and operated by Environmental Science students. A total of 918 tourists and locals took Velotaxi rides during this two-week period.

October 26

The Sustainable Campus International Symposium

With an aim to share experiences and future challenges, the Office for a Sustainable Campus hosted a symposium and invited representatives of institutions at the forefront of sustainable campus development from the United States and Japan. The presentations from Portland State University, the University of Oregon, Stanford University, the University of California, Berkeley, and four Japanese universities were very well attended.

International Symposium on Modern Society & Human Health: Tangling Structures in Lifestyles

With researchers from Peking University and Seoul National University, Hokkaido University's partner institutions, this symposium focused on health issues in Japan, China and South Korea and considered lifestyle and social environment differences in each country.

October 28

International Symposium on Sanitation Challenges in Sub Sahara With the attendance of H.E. Dr. Laurent Sedogo, Minister of Agriculture, Water and Fisheries, Burkina Faso, this symposium attracted 120 people including researchers, graduate students and JICA officials.

October 30 GiFT

The Global Issues Forum for Tomorrow was held as a new Hokkaido University initiative aimed at undergraduates and high school students. 12 young

researchers made presentations on global issues and proposed impressive and innovative solutions. Issues concerned infectious disease control, development of energy conservation technology, and understanding war as culture. These 15-minute presentations with English subtitles are available for viewing on the internet.

www.sustain.hokudai.ac.jp/GIFT/archive.php

October 31

Public Lecture -Towards the Formulation of Sustainable Urban Infrastructure Systems

Research groups from Hokkaido University and the University of Tokyo organized this public lecture to promote discussions among over 180 participants from the general public, researchers, technical experts and those involved in policy making about lessons learned in the wake of the Great East Japan Earthquake.

November 3

The Symposium on Environment and Energy

In the wake of the Great East Japan Earthquake and the catastrophe at Fukushima Daiichi Nuclear Power Plant, Japan arguably requires a change in its energy policy. In collaboration with the Ministry of the Environment, faculty members of Hokkaido University organized this symposium to discuss the great potential in Hokkaido as a region of abundant renewable energy resources.

November 4 Forum on Population Ageing and Sustainable Development

With the aim of searching for new approaches and paradigms for realizing a healthy aging society, Hokkaido University hosted an intensive seminar for students of HU and Politecnico di Torino in Italy. The seminar was followed by a public forum attracting experts from medicine, demographics, sociology and welfare engineering. Researchers from Italy, South Korea, Switzerland, Sri Lanka,

Thailand and Japan reported on the current status and future prospects concerning the aging societies of their respective nations.

November 5

The Workshop on Vulnerability, Resilience and Sustainability Of Asian Land Systems

With the participation of the President and as well as researchers of Tribhuvan University Nepal, this workshop involved land-use and land-coverage change in Nepal, China and Japan.

November 5-6 The International Meeting of Amur-Okhotsk Consortium

With the aim of environmental conservation and sustainable development, presenters from Japan, China, Russia and Mongolia shared academic data on the Amur River basin and the Sea of Okhotsk.

Poster Posturing

2011 marked the 3rd year of the very popular "Research Poster Contest" with a total of 105 students participating. This contest aims to encourage students to review their current research from the perspective of contributing toward

creating a sustainable society. It was a great opportunity for students to present their research to people from different fields of study. 92 teams of students participated in order to reconsider how their research is connected to sustainabil-

ity - undoubtedly a challenging mission. The posters were examined over two dates by 166 judges including 77 faculty members and 89 students. Each poster was examined by a total of 5 judges, with the total possible score of 375.

Winners



Three of the winners from the 2011 Sustainability Weeks Poster Contest

O

How will you spend the prize money of 150,000 yen?

I hope to conduct field work in both Africa and Europe.

Economics and Business Master's Student John Kalenga (left) I hope to attend a conference in the USA and visit some laboratories in France.

Engineering Master's Student Megumi Tazawa (right)

I would like to use the prize money to attend a conference in Germany to enhance my research.

Environmental Science Doctoral Student Yuki Miura (center)

Award Winners

Theme "Living in Risks" Pedcris M. Orencio

Graduate School of Environmental Science

Theme "Quality of Life" Risa Takashima

Graduate School of Health Science

Theme "Sustainable Production & Consumption"

John Ngoy Kalenga

Graduate School of Economics & Business Administration

Theme "Mitigation and Adaption for Climate and Nature Environment Change"

Teruaki Yuta

Graduate School of Environmental Science

Theme "Natural Resource Management"

Yuki Miura

Graduate School of Environmental Science

Theme "Rural & Urban Development" Megumi Tazawa

Graduate School of Engineering



Close Neighbors

By Juha Tuisku, Assistant Office Manager The Finnish Institute in Japan, Hokkaido Office

It might be hard to imagine that two countries that exist so far apart geographically and have so few similar influences in terms of culture could still be as close to each other as Finland and Japan. On a map the two countries are nearly 8000 kilometers apart and even the term the Finns use for the region Japan is in translates into "the Far-East". However, even geographically speaking, the two countries are only separated by one other country - Russia and thus share a common neighbor, which practically makes them a part of the same neighborhood. Even culture, which in pictures and books seems so different, stems from a very similar respect of nature and value of silence. And, if you throw in the obvious similarities between the cultures of the Finnish sauna and the Japanese onsen, the two countries might quickly start seeming rather like close brothers than distant cousins. This is why the diplomatic relations between the two countries, which began only two years after Finland gained its independence in 1919, have been close from the beginning and continue to go from strength to strength. So much so in fact, that the growing exchange in the fields of science and culture finally prompted the establishment of the Finnish Institute in Japan in Tokyo in 1998. This institute took on the tasks of promoting cooperation between the two countries in research, higher education and culture by providing

assistance and information to all people needing support travelling from Finland to Japan and vice versa.

Whilst the Tokyo office was given a warm reception by people in both countries, last year it was decided that the part of Japan that the Finns find closest to their heart, Hokkaido, needed its own office so that needs of Hokkaido could be tended to with special care. Thus, in March of last year, the Hokkaido Office of the Finnish Institute in Japan opened in Sapporo on the Hokkaido University campus.

The Hokkaido office, with Martina Tyrisevä at its helm, took on the challenging task of strengthening and maintaining the bridge that had been built between Finland and Hokkaido over the years. The Institute's new office both initiated and helped oversee new agreements being made between major universities both in Finland and in Hokkaido. The acceptance of Hokkaido University into the University of the Arctic Consortium as the first university from a non-arctic region was one of the most notable examples. To celebrate these new agreements and give them the best possible start, a meeting of minds took place during the Hokkaido University Sustainability Weeks Event held last year.

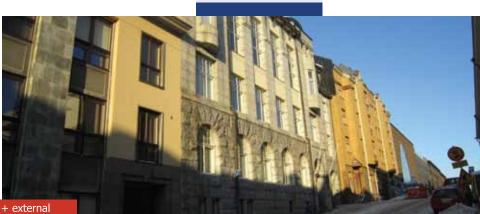
Though Finland had had its part in this campaign already before this, for instance, with the 2009 Finnish-Japanese Joint Symposium, 2011 marked Finland's

biggest role so far with a series of symposia titled Hokkaido-Finland Days. The series ended up being a joint effort organized by the Hokkaido Office of the Finnish Institute in Japan in cooperation with local co-organizers, namely the Hokkaido University Office of International Affairs, The Institute for Low Temperature Science, Center for Advanced Tourism Studies and Center for Ainu and Indigenous Studies. The series comprised of four symposia, of which the first was on international cooperation between Hokkaido and Finland in general and the last three on specific fields of research - northern environmental research, tourism and land use and indigenous education.

The opening session held on October 28 was a gathering of university presidents from the universities involved in the academic collaboration between Sapporo and Finland – many of which were initiated during the short time the Hokkaido office had been operating in Sapporo. The guests included the presidents of Oulu and Lapland University, who came from Finland along with a representative from Helsinki University and other representatives from the three universities. On Japan's side, representatives came from Hokkaido and Sapporo University. Also the Finnish Ambassador to Japan, Jari Gustafsson, took part in the proceedings and made an inspiring speech supporting the newly



Hokkaido University's new Finland Office; internal + external





strengthened relationship between the two countries. The session revolved around the agreements between the universities, as well as the future form of cooperation those agreements might enable. Hokkaido-Finland Days was a very successful event as representatives of the universities offered concrete suggestions of how they perceived the shape of future cooperation. Most notably, Professor Takeo Hondoh, the vice-president of Hokkaido University, announced that Hokkaido University will be opening a branch office within the grounds of Helsinki University in April 2012.

"Hokkaido University has taken clear steps towards Europe this past year, and Finland has undoubtedly been our most significant partner in this. We have not only signed new agreements with Lapland and Helsinki University, but also gained membership to University of the Arctic as the first university from a non-arctic region."

Thus what Hokkaido-Finland Days really did, was to seal the newly revitalized partnership between Hokkaido and Finland and promise strong ties for all future endeavours between the two

countries. In the Symposium on Northern Environmental Research held on October 31st, speakers discussed the relationship between climate change and ice formation as well as issues regarding environmental protection across borders. The purpose of the symposium was to continue the path laid in the joint symposium two years before and thus was a part of the Institute's overall goal of maintaining the bridge already built.

The symposiums held on November 1st and 2nd covered the topics of Tourism and Land Use as well as indigenous education. The invited guest lecturers discussed among other topics, the different ways in which to define tourism and its industries and how the importance of intangible heritage of our indigenous people can be respected, while still maintaining economic vitality. Thus the two days proved to be, though not the first, the next big steps on a newer bridge between the two countries, as the Hokkaido office had already taken a strong interest in bringing the two countries closer together by promoting tourism as well as facilitating cooperation between the indigenous people of Ainu and Sami.

These three one-day symposia on carefully selected themes provided a unique opportunity to gather researchers from the countries of Norway, Finland and Japan, and to propose new student and research exchange possibilities. It also established plans for new projects in 2012, which have started to take shape as

the new year has begun. According to the survey undertaken by the Finnish Institute at the beginning of 2011, Finland somewhat suffered from a lack of presence among the people of Hokkaido and in Sapporo which is why increasing that presence was labelled as one of the key aims of the Hokkaido Office. Though the great turnout during the Hokkaido-Finland Days was already above expectations even in a city the size of Sapporo, it was the wide interest shown towards such different topics that indicated the potential Finland has in Hokkaido to gain an even firmer foothold in the collective consciousness. It became evident that there is a welcoming environment for Finland within Hokkaido and that all that was needed was effort.

It remains to be seen what forms of cooperation these new partnerships between Finland and Hokkaido created last year will ultimately yield. Perhaps the most significant sign of good things to come is the office Hokkaido University has announced it is going to open in Helsinki this year. The new office will undoubtedly act as a base of cooperation between Finland and Hokkaido similar to the Institute in Sapporo. The office in Helsinki will not only open doors to all of Finland, but to all of Europe as well.

The Finnish Institute in Japan, Hokkaido Office is located within Hokkaido University, Sapporo Campus.



Martina Tyrisevä Head of Office The Finnish Institute in Japan Hokkaido



Finnish Ambassador to Japan, Jari Gustafsson speaking at the opening session of Finland Days, October 28. 2011



Executive Director, Office of International Affairs, & Vice President, Hokkaido University Takeo Hondoh at the opening session of Finland Days, October 28, 2011

Mechanically Induced Luminescence

Here is an introduction of some of the research being conducted in the Organoelement Chemistry Lab, Graduate School of Engineering, Hokkaido University.

It is well known that certain compounds, when exposed to light become energized and emit light at a fixed wavelength. This property is known as florescence or phosphorescence. When a solid compound possessing this kind of luminescence is exposed to mechanical stimuli such as grinding, scoring, or the application of pressure, changes may occur in the luminescence color of that compound. This kind of property is known as luminescent mechanochromism, and has recently become the subject of significant attention.

In the case of florescence or phosphorescence, when a dye absorbs light with a short wavelength and high energy, it reaches a state of excitation, and part of that energy is reemitted as light. In most cases, the light emitted by a given florescent dye is usually around the same wavelength. However, a certain class of dyes will emit light of greatly varying wavelengths, depending upon the environment in which the dye is situated. If the luminescent color varies according to the properties of the solvent used, it is known as solvatochromism; if the luminescence color varies as the result of vapors emitted by an organic compound, it is known as vapochromism. In the case of compounds exhibiting mechanochromism, it is believed that the interaction between the molecules within solid matter plays a major role in luminescence, and that mechanochromism arises from a change in the interaction pattern of these molecules that results from exposure to mechanical

stimuli.

Because the magnitude of the change is extremely small, and the detection sensitivity of florescence and phosphorescence is high, these compounds exhibit a sensitive response to mechanical stimuli. Potential practical applications of these properties include extremely small sensors for detecting minute physical forces, or the creation of high-density materials for recording and storing data.

References

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21st century electronics lead the way with nanotechnology

Professor Akihiro Murayama, Division of Electronics for Informatics Hokkaido Graduate School of Information Science and Technology

Our everyday lives and our modern industrialized society are made possible by electronics. Electronic technology provides us of course, with electricity and a multitude of electric devices.

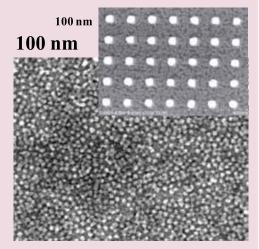
20th century quantum physics research and recently developed nanotechnology will play a major role in the effort to build a sustainable society by making drastic cutbacks on the consumption of energy. If we can use the individual electrons and photons that make up electricity and light, we can hope for major reductions in energy consumption, in the order of 1/10 - 1/100 - 1/1000. Drastic improvements to the ability of solar batteries to convert solar energy directly into electricity can also be made. Electronics research will bring about a 21st century where even more people all over the world can engage in communication using an incredibly tiny amount of energy. In my laboratory, we are devoted to research into the nano-construction of

the semiconductors used in various electronic technology, fiber-optics, solar batteries, and more, in order to create electronic components which can run on far less energy than their current counterparts. Nano is an expression of length, where one nanometer corresponds to the size of a relatively small number of atoms. The figure right shows a silicone semiconductor manufactured in a 10 nanometer disk shape, with an extremely dense structure. This silicone nano-disk is so tiny that it cannot be manufactured with our current micro-manufacturing technology. A nano-mold must be constructed from a special, molecularly designed molecular assembly, using bioengineering before the disk can be manufactured from that mold. According to quantum theory, it should be possible to manage individual electrons using semiconductors of this size. A 60 nanometer metal structure is attached above this silicone disk structure using cutting edge micro-manufacturing technology which serves as an antenna for light. In other words, this silicone nano-disk, which can manage individual electrons, can send and receive

information using light.

This research is conducted with many students, including those who have come from abroad with the hope of enriching the lifestyles of society in the 21st century as we research new materials and components for electronics governed by the theories of quantum physics using nanotechnology like this, as well as bio and genetic engineering.

For more information on the research the Laboratory of Integrated Material Processings is conducting, please visit the website, at http://processing.ist.hokudai.ac.jp/index.html





In many circumstances where borders exist in the modern world, so too do territorial disputes and labor migration issues. The Northern Territories Issue of Japan (北方領土問題) is a typical example, and more recently maritime border disputes over the islands of Senkaku and Takeshima have become politically heated issues. Cultural conflicts between local inhabitants and foreigners can also be described as "border issues".

Many border disputes have manifested in the Eurasian regions, as new countries created after the collapse of the communist sphere have conflicts with neighboring countries. This is a source for potential regional disorder as the advancement of globalization stimulates the flow of capital and peoples across borders. There are many established individual researchers working on border-related topics on any one area, however they tend to be fragmented and lack comparative analysis. These studies can also be undermined by national interests.

Hokkaido University Global COE program Reshaping Japan's Border studies led by Professor Akihiro Iwashita uses widely accepted approaches in international border studies research to reconsider border issues through a non-nationalistic prism.

We seek to compare similar phenomena in different areas of the world to elucidate constructive information concerning local border issues and disseminate this information to Japanese society.

The regions of Europe and North America, have a rich history of de-bordering and re-bordering. In Europe the cue was the collapse of communism and the expansion of regional integration. In the case of North America, after 9-11, border management has been tightened but the flow of people, capital, goods and services across the border has increased.

In our efforts to network the fragmented history of research into border studies in the Eurasian region, our GCOE program aims to achieve the following:

- Invite fragmented individual researchers working on border-related issues within the Eurasia area to a united forum to bridge and integrate our overseas networks and communities
- Create a Japan International Border
 Studies Network (JIBSN) to share information relating to border-related conflicts among Japanese scholars and practitioners
- Create a core of young and promising graduate students and researchers in the field of border studies through the rich materials and resources of Hokkaido University.

It is hoped our efforts will have major impacts in policy-making circles which will in turn assist in resolving border-related conflicts and stabilize regions for the peace and prosperity of the world. Our achievements can be seen on our web site, at

http://borderstudies.jp/en/







First Step Program

As part of expanding our repertoire of outbound programs available to domestic students, the Office of International Affairs has created what is known as the First Step Program. This exciting program is designed to give Hokkaido University students a chance to visit foreign countries, Japanese organizations, private companies to meet with experts in various fields.

As a 'first step', participants in this program can kick-start their future careers by paving the way to obtaining a foreign language, skills working in the global arena or completing an internship overseas.

The very first trip under the banner of the "First Step Program" was held from the 19th of February to the 2nd of March this year. A total of 24 students visited both Laos and Singapore with a very busy schedule which included visits to JICA Laos office, World Bank Laos Office, JETRO Singapore, factories, universities and many other organizations. According to the architect of the program, Mikio Masaki of the Office of International Affairs, the program has many great

objectives which will broaden students horizons and raise their skill potential. He outlines six of these:

- to narrow the gap between imagination and reality for students in obtaining the career they seek,
- 2. to improve students communication skills including presentation, language, and planning abilities,
- 3. to broaden cross cultural understanding,
- 4. to deepen students understanding in a specialized field,
- 5. to clarify future career design for students who require a hands on perspective, and
- 6. to broaden student's horizons into the global arena.

The program is the first of its' kind in Japan according to Mr Masaki for two main reasons.

"Students can accumulate diversified experience through visiting development organizations, private companies, as well as universities within one single program, and First Step also includes a presentation component on studying abroad to Hokkaido University which gives the participant a chance to improve their presentation skills in English and Japanese whilst activating student exchange activity. There is no other program in a University in Japan that offers such a diverse program."

Quick First Step Program Facts Laos and Singapore Trip

Hokkaido University Participants: 24

Total Days: 13 Total visits: 16

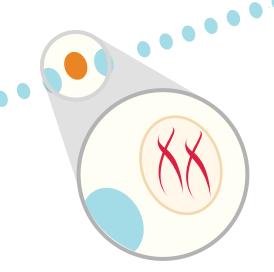
Total Cost borne by the student: 100,000 Yen











Hokkaido University joining forces to prevent and control

zoonoses

In an extremely important step forward, Hokkaido University Research Center for Zoonosis Control has joined forces with the World Health Organization in becoming a collaborating centre in the fight against infectious diseases. With its designation as a WHO Collaborating Centre, the institution will aim to develop new diagnostic techniques for infectious diseases based on information collected more exhaustively from a wider range of sources. The center will also become a global hub for the control of zoonoses by attracting researchers from around the world.

The inauguration ceremony held December 5, was attended by Dr Shin Young-Soo, Regional Director of WHO for the Western Pacific as well as distinguished members from government and academic circles. In his address, Dr Shin Young-Soo congratulated the centre and recognized its valuable contribution.

The role Hokkaido University has played has been crucial for the international community and it will be more so with its' designation as a WHO Collaborating Centre in fighting the increasing threats of zoonoses and emerging diseases.

In recent years, the incidence of infectious diseases has risen as viruses of animal origin, such as avian influenza and severe acute respiratory syndrome (SARS) have been transmitted to humans. It has been found that 60% of infectious diseases that infect humans and 75% of emerging infectious diseases are of animal origin.

Increasing population growth, overcrowding and encroachment into natural habitats create the conditions for the continued emergence of infectious diseases. Globalization and the increasingly interconnected world we live in provide the means for rapid

spread. Past epidemics and pandemics have been valuable in the lessons they have taught us but many factors remain unknown. The network WHO is developing is designed to provide stronger systems in the form of cross collaboration across different sectors.

Originally, the Hokkaido University Research Center for Zoonosis Control was established in April 2005 to achieve four main goals: first to advance the research and development necessary to protect humans from zoonoses; second, to develop effective measures for the prevention, diagnosis and treatment of zoonoses as well as yield practical applications; third to promote the distribution of related information and technology; and fourth to train experts in zoonosis control. The center has achieved remarkable accomplishments based on its research and educational activities. With this new designation, the center can play an even bigger role in the effective coordination and support in the prevention and control of zoonoses.

We can now conduct global

surveillance for the control of known zoonoses in animals and humans and for the detection and evaluation of unknown potential pathogens that may cause emerging zoonotic infections.

The Centers' Director Professor Hiroshi Kida had the following to say about the new collaboration.

On this special occasion, I am honored to declare that we share our goal, that is, the control of zoonoses, in collaboration with the World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health, (OIE) together with veterinary and human medicine in the world under the umbrella of the ONE WORLD, ONE HEALTH concept*.

To find out more about the centers' research, visit their website at

www.hokudai.ac.jp/czc/index-e.htm

*The One Health concept is a Worldwide strategy for expanding interdisciplinary collaborations and communications in all aspects of health care for humans, domestic animals and wildlife.



Photo: Centre Director Hiroshi Kida poses with the commemorative plaque alongside distinguished guests at the Inauguration ceremony held December 05, 2011.

Raising funds for AIT in the wake of the Bangkok Flooding Disaster

Friday, 21 October 2011 was the day an important partner experienced its darkest day when a monumental flood impacted the entire campus, submerging it under 2.5 meters of water on average. For two weeks prior, AIT fought an unprecedented battle against the rising tide, but full evacuation was the only answer in the end followed by rebuilding and rehabilitation of the campus. The University suffered severe damage to 50% of its academic and administrative buildings and close to 40% of its residences.

Since November 2008, our two universities have healthily been promoting educational and academic exchange and cooperation and last year saw the launch of a double degree program between the Transportation Engineering field of study at AIT and the Research Group of Policy for Engineering and Environment of Engineering at Hokkaido University. The shocking images of one of Thailands' most prestigious Universities, deluged by water prompted us to conduct a Hokkaido University fund

raiser in December. Whilst small in terms of the cost to rebuild the campus, we managed to raise over \$17,000 which was immediately sent to the AIT Flood Emergency Fund.

We wish the Asian Insitute of Technology an expedient and full recovery.



Above: A campus building clearly showing the flood level and Bottom: Amazingly three months to the day of the inundation, the Asian Institute of Technology celebrates its 116th Graduation Ceremony.



TEA for 200!

On the 29th of November, 2011 the Hokkaido University International Women's Club (IWC) held a traditional tea ceremony for International students to enjoy in the foyer of the Office of International Affairs. International Students got to see first-hand the tea making process, and also got to try the aromatic and full flavored green tea. The event was hugely popular with many International Students taking a deep interest in this Japanese tradition.

Did you know?

Drinking Japanese green tea involves a six step process known as 'temae.'





Veterinary Medicine

Hokkaido University began offering courses in Veterinary Medicine from 1880 - only four years after being founded, but it wasn't until 1910 that we offered it as formal curriculum. The Universitys' Veterinary Medicine courses evolved into the Second Department of Animal Husbandry in 1913, and then into the Department of Veterinary Medicine in the Faculty of Agriculture in 1949.

In 1952, the School of Veterinary Medicine, the first school of its kind in Japan at the time, was established at Hokkaido University.

Ever since its inception, the school has maintained a policy of placing equal emphasis on clinical veterinary medicine and on fundamental research in animal life science in general so as to achieve excellence in the research in the former. In 1995, the Graduate School of Veterinary Medicine was established, under which the School of Veterinary Medicine was reorganized.

Graduate School of Veterinary Medicine

We are comprised of five departments: the Department of Biomedical Sciences, the Department of Disease Control, the Department of Veterinary Clinical Sciences, the Department of Environmental Veterinary Sciences, and the Department of Applied Veterinary Sciences. In addition, we offer a collaborative course in Zoonosis conducted by faculty members of the Research Center for Zoonosis Control, established 2005. Through research, we aim to contribute to the well-being of humans and animals on a global scale. Our goal is to nurture researchers specializing in life science, zoonosis, clinical care for companion animals, conservation of ecosystems, and food hygiene. Researchers who possess knowledge and technical expertise to play active roles in these fields both in Japan and abroad. The Graduate School of Veterinary Medicine has accepted many international students, facilitating research projects carried out jointly by Japanese and international researchers. In addition, we sponsor field research projects in Africa, Siberia, South America and Southeast Asia. Through these practical approaches to educational research, we play an active role in nurturing researchers with international

perspectives and make academic

contributions to the international community.

In addition, the Graduate School of Veterinary Medicine and the Research Center for Zoonosis Control have jointly undertaken a project named Program for **Excellence for Zoonosis Control** (2003-2007) as part of the 21st Century Center of Excellence (COE) Program, as well as a project named Establishment of International Collaboration Centers for Zoonosis Control as part of the Global COE Program, and have established a solid academic network with research institutions in 16 countries around the world. We have also begun working with a research institution in Africa for the first time through a project named African Network of Research on Wildlife Medicine and Chemical Hazards (2009-2011) as part of the Asia-Africa Science Platform Program.

We have been actively recruiting graduate students from abroad and have been assisting Japanese graduate students in conducting academic projects overseas. We offer an increasing number of graduate classes in English.

School of Veterinary Medicine

The School of Veterinary Medicine accepts up to 40 students a year and provides a six-year education program which prepares students to become qualified veterinarians. As a future endeavor, faculty members will work with their counterparts in the Faculty of Animal Husbandry in Obihiro University of Agriculture and Veterinary Medicine to start providing joint courses in veterinary medicine to students who will be admitted from 2012. These new courses are intended to offer students better education in veterinary medicine and to nurture them to become veterinarians capable of meeting diversified social needs.

Whether you're a self-supported international student or Japanese returning to Japan after graduating from high schools overseas, the School of Veterinary Medicine welcomes you.



Graduate School of Veterinary Science

Graduate School of Veterinary Medicine School of Veterinary Science Office of International Affairs Main Sapporo Sapporo Campus Station 500m

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For more information about the Graduate School of Veterinary Medicine, visit our website at

www.vetmed.hokudai.ac.jp/index-e.html

For information regarding entry requirements into our Undergraduate Course, please visit the Admission Center Website.

www.hokudai.ac.jp/bureau/nyu/english/en/



Students attending to a dog



Hokkaido University Graduate

Age: 33

Residence: Sapporo

JakeEdge

As someone that failed the Hokkaido University entrance examination the first time round, Jake Edge is someone that understands that ultimately, perseverance pays. Jake prepared for the test like many other students: he researched a topic he really wanted to study, took some Japanese classes offered by the Office of International Affairs and spent countless hours in the lab studying and preparing.

It was the spring of 2005 when Jake arrived back in Sapporo after almost a two year absence from which time he completed the Hokkaido University's one year HUSTEP Program. This time, Jake had his sights set on completing a master's program in the Graduate School of Economics and Business Administration. After obtaining a full Japanese Government Scholarship (Monbukagakusho) he left his hometown of Portland Oregon and a secure and promising job at Nike to head back to the University as a research student for what should have been a period of 3 years. It lasted 4 years. What he wasn't aware of, was that he would be required to speak, read, and research completely in Japanese - and on top of that, compete with native Japanese students for entry into the master's program. Back then, there were no faculty courses offered in English, so Jake found himself facing the impossible.

"Failing the Hokkaido University entrance exam completely crushed my world. Now looking back however, it also served to toughen me up"

For the next 6 months, Jake forced himself to study over 12 hours a day and in the end, proved that anything is obtainable if you're realistic and determined to reach your goal. Whilst he claims he barely passed, it secured his entry into a highly

competitive master's program wherein he completed all his credits within the first of two years.

"My master's topic was to do with Information Quality. Basically a field of research focused on analyzing the effectiveness both qualitatively and quantitatively of Information Systems in the enterprise environment. It was really a great degree with a mix of lectures, seminars and smaller interactive group sessions."

After submitting a thesis and getting one article published in Japanese, he graduated and began working for "Technoface," a cutting-edge IT company based here in Sapporo.

"My Sensei, Dr. Yasuki Sekiguchi, who I've always had enormous respect for, introduced me to the current company I work for way back in 2002 after which I completed an internship for 6 months. They then hired me in April, 2009."

Jake has worked for Technoface for almost three years as a Systems Engineer but has been entrusted with many different roles and responsibilities. He sees the benefit in working for a small Japanese company in that he gets to wear many hats.

"It's a varied and exciting role which exposes me to International Business

relations, I'm also an Analyst of sorts, and I of course engineer clients' information technology needs."

Working in a Japanese office environment as a foreigner, he claims that being the odd one out kind of "falls away" to a large extent after a period of working alongside colleagues.

"The first year I wanted to show that I could do it like they do. I was sometimes doing 100 hour weeks, I didn't take a holiday and I focused solely on my career. It helped me become a permanent and respected fixture in the company."

When asked about the Japanese work culture, he notes the following.

"Japanese people have a very high integrity. For example, when they're at work, when no one's looking, they're still going at it... they still deliver. I love that professionalism about this country."

As for the future, Jake would like to be involved in some capacity in the sister-city relationship between Portland and Sapporo. Whether as a weekend venture or actively working in the field full-time he definitely wants to get more involved as an Alumni of Hokkaido University to promote more student exchange opportunities.

"I love living in this city. At the moment there is nowhere else I would rather be."

Jakes' two Hokkaido University Experiences

1. HUSTEP 2003

Jakes' first foreign exchange experience was to Japan in 2002 when he applied through his home university (Portland State University) in America to Hokkaido University's HUSTEP program. He spent what he recalls as one of the best years of his life when he was 22 in Hokkaido.

"I just had a great time here. I went snowboarding in the winter, I travelled around the country every opportunity I had, in the summers I went camping at Shikotsu Lake, tried to do some biking..."

For more information on Hokkaido University's HUSTEP Program, please visit the following website and follow the links.

www.isc.hokudai.ac.jp > Course Program > Hokkaido University Short term Exchange Program (HUSTEP)

2. Masters of Economics and Business Administration

Jake completed a Master's of Business Administration largely in Japanese but was able to submit his final thesis in English to his supervisor. These days, Hokkaido University offers more classes in English in the Graduate School of Economics and Business Administration, and it has become possible to obtain a master's degree in this field with only basic Japanese if guided by an English speaking supervisor.

For details on applying, please visit the Graduate School of Economics and Business Administration website.

http://www.econ.hokudai.ac.jp/en08/pub.html



After completing Dental School in Bangladesh, I had a strong desire to continue my studies abroad. In Bangladesh, many of our respected professors and senior dental surgeons were trained in Japan and many are actually Hokkaido University alumni.

During my studies, I remember hearing a lot from them about Japan: Japanese culture, Japanese food, and especially Hokkaido University. They clearly held very high opinions of this University, and so it was that it became my dream to study here. Before coming to Japan, I had never lived apart from my family. It was also my first time leaving Bangladesh. Although I had read and heard a little about everyday life in Japan, I was afraid that it would be completely different from what I was used to.

I stepped into a new world when I came to Sapporo. But, rather than cold, I found it colorful and full of life.

Learning Japanese at the International Student Center was my first step into study at HU, and I was surprised at how many other international students were in Hokkaido University and how active their lives were. Almost immediately I found lots of great friends here. My wonderful lab members help me in all aspects, not only in my academic life. Their easy-going attitude gives me the

Nusrat Fatema Chowdrury is currently conducting a PhD in the Graduate School of Dental Medicine. This is her story about living in Hokkaido, being a student at Hokudai, and becoming acquainted with the cold winters here in Sapporo.

feeling that I am never far from home.

The educational environment I found here is very different from that in my country. There is much more emphasis placed on seminars, group discussions, and presentations. I know that this will prove to be a valuable life skill in my future career. Japanese people are very diligent, which has encouraged me to become more active and more efficient in

all aspects of my life. Besides the work environment of university, life is also ideal, safe, and very smooth here. I fell in love with the campus here. It is so large and full of natural beauty and never fails to catch my breath. The amazing colors on campus change with every season making Sapporo campus undoubtedly the most beautiful campus in Japan.

My first winter here was amazing. I experienced snow together with the biggest event snow festival in the world for the very first time.* I remember thinking how peaceful it was to watch snow fall - it's like a blessing from God and always puts me in a relaxing kind of mood. I have also become acquainted with many kinds of sports and activities, such as skiing which I could never have experienced back in Bangladesh. I was a little apprehensive at first, but in the end was able to cope with my first winter in Sapporo very well.

*The Sapporo Snow Festival, one of Japan's largest winter events, attracts a growing number of visitors from Japan and abroad every year. Every winter, over a million people come to Sapporo to see the hundreds of beautiful snow statues and ice sculptures which line Odori Park, the grounds at Community Dome Tsudome, and the main street in Susukino. For seven days in February, these statues and sculptures (both large and small) turn Sapporo into a winter dreamland of crystal-like ice and white snow.

Sawakai

Sawakai (chat over tea) is a cross cultural gathering held twice a month to provide a space where Japanese and International students can mingle with each other. It is intended to help international students develop a sense of belonging, to stimulate Japanese students' interest in international cultures and customs, and to help both groups of students better understand each other. A Sawakai session starts with an ice-breaking game, which is followed by a group discussion on a selected subject with participants split into two groups - an English speaking group and a Japanese speaking group. The last 30 minutes of a session is devoted to small talk among all participants.

Speak to me!

Language Corner is a weekly session in which international students have an opportunity to improve their skills in speaking Japanese, and Japanese students their English-speaking skills.

An international student teams up with a Japanese student to have a free discussion either in English or in Japanese. Twenty or more students participate in each session.

Time: 2:00 p.m. to 3:30 p.m. on every Friday except last Friday of the month.

Venue: Student Lounge on the first floor of the Office of International Affairs



To find out about any upcoming events hosted by the Office of International Affairs, drop by our office or check out the notice boards in the foyer of our building.



International Talk

International Talk is a cross-cultural gathering that offers international students an opportunity to talk about their native cultures, and Japanese students have a chance to share their experiences of traveling and studying abroad. Students share observations and anecdotal glimpes of their home countries or countries they have visited as seen through their eyes. Some international students show up to a session in native costume, and some perform traditional dances and songs from their native home-land to the delight of the audience. This cross-cultural program is open to students and faculty members of Hokkaido University as well as to the

Time: Held regularly throughout the year. Venue: Student Lounge on the first floor of the Office of International Affairs

Your feedback is most welcome as we strive toward continuous improvement of the content.

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For previous editions of the magazine http://www.hokudai.ac.jp/en/pickup/publicrelations.html

Learning to save lives

In recent years, AEDs (Automatic External Defibrillator) have become familiar sights in public buildings and on the Hokkaido University campus.

HU's Sapporo campus has AEDs in sixty-three locations, four at the Hakodate campus, and a unit at the Date Seminar House in Date, Hokkaido.

However, most persons do not know that anyone, not just certified persons can use the AED, and this lack of knowledge can be the difference between life and death for a person that has experienced sudden cardiac arrest.

In recent years, the number of international students and employees has increased at HU, and as an extension of safety management, the Office of International Affairs (OIA) sponsored the AED in English Training Session in November over three days for our international students, employees, and their families. Under the supervision and co-sponsorship of HU Health Care Center professionals and HU Office of Health and Safety, fifteen participants: nine graduate students and six employees participated.

Participants viewed an instructional DVD and PowerPoint and learned hands-on how to do CPR and use the AED.

Harisoa Rakotonoely, a student from Madagascar (pictured below) said after the training that she felt more confident in being able to do what's required in the case of a life and death situation.





Photo Competition Details

The second OIA photo competition is now open. What we are looking for: An artistic image that defines Hokkaido in some way. It can be anything: wildlife, scenery, food, people. The photographs must have been taken within the geographical boundaries of Hokkaido. We are looking for a photograph that inspires beauty and positivity about this beautiful island! Please submit your photograph with your full name, course enrolment and faculty, to Warren Pohl, International Marketing and

Publications Coordinator, Office of International Affairs. Please also provide a short description of the photograph and what it means to you in English.

Email address: pr@oia.hokudai.ac.jp
You may enter up to 5 photographs. Open to International Students and Researchers.

DEADLINE: 01 December, 2012. 2 winners will receive a 10,000 Yen Book Voucher and get their photograph published in the Hokkaido University Magazine - Web and Print - 2013 edition.

CONDITIONS

The photograph must be taken by you and be either a digital photograph or a high-quality scan. The entrant must be the sole author and owner of the copyright. By entering your photograph into the competition, you grant to Hokkaido University the right to use your images for promotion of the University and Hokkaido itself. The photographer will be credited whenever possible. Entrants must not infringe on the privacy rights, copyright or other rights of any person.

DIGITAL CRITERIA: Uploaded Photos must be a minimum 1024 px longest side at 72 dpi. Uploaded photos must be saved as JPEG, and be no larger than 1 MB

DIGITAL RESTRICTIONS: Digital adjustments are only acceptable if limited to minor cleaning work, colour, saturation and contrast work. The faithful representation of what you saw at the time of the shot being taken must be maintained. Cropping is allowed.

This comic strip is one Hokkaido University International students' take on how people from Hokkaido and Iceland view winter..











Alumni Network!

A new Alumni Network!

In order to establish an effective Hokkaido University Network that can offer our Alumni the latest information from our University as well as offices located around the world, we are currently in the process of collecting contact address details of our graduates.

To ensure the protection of your privacy, the information received will be used ONLY for the purpose of networking between Hokkaido University and yourself and follows all regulations set out in the "Hokkaido University Regulations on Personal Information Management" policy.

We kindly request that you download and fill in the form via the link below and send it to the email address specified.

www.isc.hokudai.ac.jp/www_ISC/

MENU

International Student

International Students' Contact Addresses after Graduation.

Email form to: rshien@oia.hokudai.ac.jp

Publications

2011 was a bumper year for Hokkaido University in strengthening our English language publication material.

A total of 8 new publications were made available, to be distributed over the coming year to University visitors, students interested in our course offerings, and at sustainability events and initiatives.

If you would like a free mail out of any of the below material, please provide your name, address, and reason you require the material in an email to;

pr@oia.hokudai.ac.jp

















WHAT'S BEEN HAPPENING?

Hokkaido University has improved and expanded accommodation facilities for students! In 2011, Hokkaido University acquired a 252 room student dormitory a stones throw away from Sapporo station. We now have one of the highest ratios of all universities in Japan in the provision of accommodation to the International Student Body. (48%)

You're not alone.... If times get tough, we now provide a professional Counselling Service free and confidential for enrolled students in relation to issues that may be affecting your study. Our professional counselling team is available to help you explore options towards resolving your difficulties. ANYTIME!

The Office of International Affairs is expanding globally! Last year in 2011 we proudly opened an overseas base in Seoul, Korea in addition to our office in Beijing, China. This year we plan to expand even further afield with Hokkaido University operated bases planned for Helsinki, Finland and Lusaka, Zambia.

In the wake of the March 2011 earthquake, tsunami and subsequent meltdown of facilities at the Fukushima nuclear power plant, we have kept a close eye on radiation levels on campus by daily monitoring and disclosure on our website. In brief, levels never really changed.

Launching soon!
The official Office of International
Affairs Twitter Feed.

@hokkaido_uni

