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Kobe University Newsletter "Kaze"

Vol. 02

April 2017

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New technology reveals hidden danger

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Gateway to success in global business

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Kobe (University) Beef

The city of Kobe is world famous for its beef – it even became the namesake of American basketball player Kobe Bryant. In fact, beef only became part of the Japanese diet a little over a hundred years ago. Out of the species native to Japan, Tajima cattle from Hyogo prefecture (a variety of Japanese black cattle) gained fame as the source of Kobe beef.

Authentic Kobe beef must come from purebred Tajima cattle and fulfil the strict guidelines set out by the Kobe Beef Marketing and Distribution Promotion Association. The meat is characterized by a very evenly dispersed marbling of fat, unlike most American or European varieties. Due to the high levels of unsaturated fatty acids, Kobe beef fat has a low melting point, giving it a rich flavor and melt-in-your-mouth texture (it is often described as buttery).

There are rumors that Kobe cows are fed beer, massaged and played classical music. However, farmers have debunked this - the

secret behind quality Kobe beef is simply care, attention, and a healthy diet.

Since 2005, the Food Resources Education and Research Center in our Graduate School of Agricultural Science has been producing its own brand: "Kobe University Beef". Around 100 cattle are kept at the Center, and every year roughly 30 are shipped out for commercial use. The cattle roam freely within the spacious grounds from a young age, grazing on high-quality grass harvested at the Center until they are shipped out. To choose the best breeding cows for commercial beef, the Research Center selects cows by identifying and analyzing the genes that give Kobe beef its special characteristics.

Kobe University Beef has taken first prize at regional competitions, and made an appearance in Japanese retailers such as Mitsukoshi department store in Tokyo and the Isetan online shop.



Why "Kaze"?

There are two main concepts behind the title "Kaze", meaning "wind". Firstly, Kobe University's goal to innovate, creating a wind of change. Secondly, our location at the foot of Mt Rokkō, an area known for the invigorating wind of Rokkō-oroshi that blows down from the mountain range.

The calligraphy on the cover of "Kaze" was created by Professor Emeritus UOZUMI Kazuaki, a researcher of calligraphy at Kobe University.



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神戸大学

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Find out more:  www.kobe-u.ac.jp/en



SPOTLIGHT

Collaborating to solve global issues: The new Faculty of Global Human Sciences

In April 2017 the new Faculty of Global Human Sciences was formed by combining the Faculty of Intercultural Studies and the Faculty of Human Development. Overseas study and fieldwork is compulsory, aiming to train people who can collaborate to solve global issues.

Interview 1: Professor OKADA Akihiro,
Head of the Faculty of Global Human Sciences Planning Office &
Professor at the Graduate School of Human Development and Environment

A fusion that maximizes the strengths of both faculties

What was the catalyst for creating this new faculty?

In 2013 the Ministry of Education, Culture, Sports, Science and Technology (MEXT) created new guidelines for Japan's national universities. A key concept was how far Kobe University can internationalize while preserving what makes us unique. One suggestion was to establish a Faculty of Global Human Sciences. It was a bold move, and some people were unsure about it to start with.

How has the syllabus changed?

The faculties of Intercultural Studies and Human Development were both issue-based, connecting diverse disciplines to achieve a certain goal. We've developed good programs in both faculties during the past quarter century, so we don't need to make a new faculty from scratch. Building on the unique strengths of these faculties is more important.

The concept for the new faculty is global issues. Isn't this a long way from the Faculty of Human Development?

Yes, the Faculty of Human Development was domestic-focused. But I think the practical sensibility,

theory and know-how it cultivated are huge assets in solving global issues. The new faculty aims to produce globally-minded graduates who can solve problems by collaborating with a diverse range of people. The Faculty of Human Development studied human beings from birth until death, and the Faculty of Intercultural Studies focused on internationality and understanding of others. By combining these traits, we can cultivate a new type of outward-looking person.

Sending 370 people overseas

So overseas training is compulsory?

Yes. It's known as the Global Studies Program (GSP) and it's a combination of overseas study and fieldwork. Other universities send entire faculties of students overseas, but it's usually about 100 students, all in one trip. There are 370 places in the new faculty. It's not easy to take that many people overseas on a single trip, so our professors have worked hard and created over 100 overseas programs.

What support will you provide for students when they travel overseas?

Cost and safety are the biggest issues right now. We understand it's not cheap. We're planning to support them with scholarships and other programs. As for safety, all first-years have an intensive orientation. We

don't say "don't go there because it's dangerous", we teach them how to protect themselves.

Do you have a message for your students about studying or working overseas?

If you go, it changes you. It's different from a vacation – their horizons are broadened by talking to foreign students and facing issues head on. Yes, it costs money, but I'm convinced they will gain something equally if not more valuable.

Responding to global issues

This faculty is shaping up to be quite unique.

Unlike many internationally-oriented faculties in Japan, the new faculty isn't just about culture. "Human" is included in the faculty name, and having this area of specialization is a great strength. It is a faculty where students can confirm the validity of their own fields by responding to concrete issues.

Graduates from our predecessor faculties were highly evaluated for their flexibility. Although they have a specific area of expertise, they're not restricted by it. I hope that the students of the new faculty will be flexible, strong, and kind: able to understand and collaborate with people from diverse backgrounds.

What do people study at the Faculty of Global Human Sciences? We can't list everything here. But by interviewing professors from the two former faculties, we found some common points.

interviewee

USHIMARU Atsushi



Interview 2: Professor USHIMARU Atsushi,
Graduate School of Human Development and Environment

Connected to the world by our natural surroundings

When I hear ecology I picture animals, but your specialty is plants.

When I started university I wanted to study insects. Plants don't move much, so I thought they were boring [laughs]. But then I read that plants control insect behavior with their floral features, and I was fascinated. That was the beginning of my research into the natural history and ecology of flowers – how plants have evolved in relation to insect pollinators, why some plants

self-fertilize, etc. I study flowers and insects as a set.

I've always been interested in the semi-natural ecosystems closest to humans – how the ecosystems are affected by human activity and attitudes – which involves working with professors and students in other fields.

You're a scientist surrounded by humanities specialists. Is it different from a totally science-focused faculty?

We're "sociable" scientists. Science has an image of being narrow-minded [laughs] but my faculty is a bit

different. For example, when you go to paddy fields to research biodiversity, being able to chat for an hour with the farmer is a very important skill. Our students are good at this.

Do you have any particular expectations for the new faculty?

It's great to be able to get to know different kinds of people. In science it's important to specialize, but right now there are lots of interesting things happening between fields. It's a waste to limit your interests. I hope we can create an atmosphere where people team up to do something interesting.

What do you think about the demand for a global perspective?

Science has always been

international. When you're deciding what to research, it needs originality that will interest people around the world, and when you present the results you have to be aware of the international perspective. There are lots of topics with international impact – for example, many European researchers are now interested in the agricultural ecosystems of East Asia.

What sort of students are you looking for?

People who are interested in many things but can focus on one thing [laughs]. It seems contradictory, but I think they can coexist. Cast your net wide, choose a topic that suits you and follow through. This faculty encourages that attitude.

Personally, I think this sort of faculty is needed to increase public support for science. Being able to explain your own field in an

interesting way is vital. In the graduate school we train research specialists, but I also want to produce individuals who can go out into society equipped with a broad range of knowledge and explain why science is great.

So you're training science-oriented people that we can count on.

Microbiology at graduate school doesn't usually include much mathematics or physics, but ecology needs a lot of numbers. You have to learn statistics and how to program for conducting analyses. These are good conditions to train science generalists. If you study hard here, you can become the sort of scientist that society needs.

interviewee
ITO Tomomi



4 years of independent research

You're researching Thai Buddhism—what motivated you to pursue this topic?

When I was at university I participated in a camp with local students in northern Thailand. It was a lot of fun, so I decided to study the Thai language. I went to evening classes and a language school in Thailand during the summer break. Then I went to a Canadian university

as an exchange student, learned about Buddhadasa Bhikkhu, a reformer of modern Thai Buddhism, and chose this as my thesis topic.

For Thai people, Buddhism forms the core philosophy for living a good life. Religion is the base on which society is built, and various social issues are reflected in the teachings of Buddhadasa.

It sounds like your overseas experiences had a big impact

There are lots of leads that help you find out where your interests lie. Even if you are just vaguely interested when

Interview 3: Professor ITO Tomomi,
Graduate School of Intercultural Studies

listening to a lecture, actually going to the place and talking to people enables you to see more clearly where you should specialize.

Our job as professors is to support this, encouraging each student's intellectual curiosity and helping them structure it into a thesis.

I'm guessing that East Asia, starting with Thailand, is your recommended place to study?

If you're interested! [laughs] It's a good place to travel for your first overseas trip. And there are many things you can't learn unless you go there yourself. I think it's the best place to enjoy making your own experiences and discoveries.

After 10 months of learning Thai during her exchange year, one student was able to interview local people for field surveys. Using this language ability, she interviewed Thai chefs in Kobe and faithfully depicted their lives working in Japan, a world separated from ours by cultural and linguistic barriers.

So you can pursue your own subject precisely because it's an interdisciplinary faculty?

We offer so many different lectures that students have to decide for themselves. When you choose a lecture that interests you, you absorb the perspective gained from that lecture and it becomes another tool for analysis. For example, the perspective gained from studying issues surrounding coexistence and identity for foreign migrants in Europe can be applied to discussions of employment in Japan for former training program participants in Vietnam.

It seems like the experience researching can be applied no matter where you end up.

I really think that's true. Quite a lot of our graduates are employed by large companies in southeast Asia. Your first job is difficult, especially

interacting with local people as the representative of a large company, but if you build relationships by making friends as a student, it helps in the future. Companies also expect a lot in this regard.

My seminar is on East Asia, but if you want to work in an international, diverse environment anywhere in the world, the Faculty of Global Human Sciences is a good place to start.



"There are many things you can't learn unless you go there yourself."

New technology reveals hidden danger

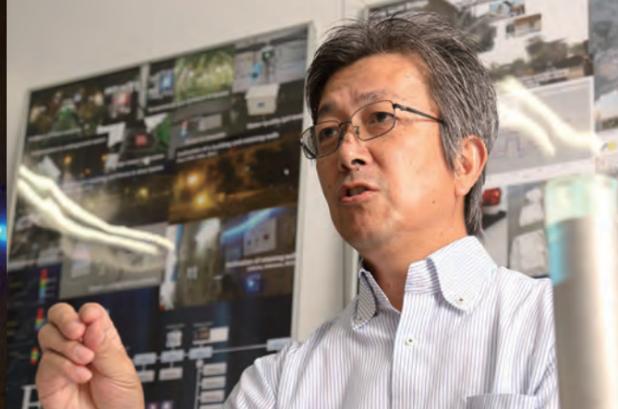
A new methodology hatched at Kobe University is spreading to other parts of the world: On-Site Visualization (OSV), a system which can detect warning signs before accidents occur at construction sites. OSV started in 2006 as a handmade gadget. Now it has evolved into a high-level, precise system involving multiple companies, while also starting to become simpler and more affordable. How does it work, how did it develop so fast, and what is the goal behind its simplification? We asked the head of the On-Site Visualization Consortium and the mastermind behind this invention, Professor AKUTAGAWA Shinichi.

The market version of the OSV device. The LEIS/pocket (Light Emitting Inclination Sensor/pocket) to the right accurately measures changes in gradient and displays them as colored lights.

The LEC (Light Emitting Converter) to the left connects to sensors for displacement, pressure and temperature, and converts the data into colors in real time, as well as recording it on an SD card within the device.



OSV prototype: the handmade "Light Emitting Deformation Sensor". Veneer panels simulate a mountain slope, and the lights change to blue around the boards that moved.



Interviewee:
Professor AKUTAGAWA Shinichi
Graduate School of Engineering

**"It's not just about being hi-tech
– we have to simplify things too"**

Giving shape to an idea

How did you come up with the concept for OSV?

My original field was rock engineering, a particularly esoteric field even within civil engineering. For example, what happens when you dig a tunnel through rock? My research used computer simulations rather than going out and doing experiments.

In 2003 there was a serious cave-in at the tunnel for the then under-construction Hokuriku Shinkansen (bullet train). I started to wonder why the accident had occurred, and what kind of safety measures they used. For about 3 years I thought about what I could do, then one day I learned that you could buy a full-colored LED light surprisingly cheaply, and thought "this is it".

To start with, we tried making something ourselves. The first model in 2006 was the "Light Emitting Deformation Sensor (LEDS)". The distance between two points was measured with wires and springs, and the LED colors changed in response to deformation.

One company saw this and made an upgraded LEDs for us, which looked cooler [laughs]. It was easy to carry around, so we used it for presentations and PR. People began to say "I get what you want to do", and in 2010 we set up the OSV Consortium, an organization that works on developing and disseminating OSV. At first we shared information with 18 companies – that's now 71.

That's a very quick development.

When I explained the OSV concept, lots of people responded with "we wanted something like this". Of course civil engineering sites already measure things – for example, there is a sensor at the front of each tunnel – but the sensor data is displayed on an off-site computer. Every second is vital if there is an accident, so ideally you want to be able to see whatever is happening on the spot.

Calculations are unnecessary if there's enough data?

Has OSV prevented any casualties so far?

One group attached some Light Emitting Converters (see photo on previous page) to a temporary ramp at a motorway construction site. The LEC colors kept changing, and when they investigated they found that a crucial piece of concrete had cracked. So they added reinforcements, and finished the job without incident.

Are there always warning signs before an accident?

Yes. There's always some unusual movement. Small movements that can't be seen by the naked eye can almost always be picked up by sensors. But if those sensors are expensive, you can't put them everywhere – for example, every 100 meters in a tunnel.

The computer calculations I make estimate how safe an area is overall based on limited data taken from various points. We can estimate, but no one can vouch for the areas which don't have data. I always worried about whether it's really ok to make statements about an entire area based on this small amount of data. The more the better. If there's data lined up from end to end of the tunnel, and you can see it on-site, then we don't necessarily need computer calculations.

When you drive at night, there are reflective blocks lined up at the side of the road. We want that many data points. For example, the triangular cones used on building sites. If they had OSV functions, we wouldn't need to budget for sensors and decide where to put them. They would already be in the cones [laughs].

An unusual use for optical fibers

So you need to lower costs on a large scale. Can you do it?

Companies from many different industries have joined our consortium, and there's talk that what took 200,000 yen before can now be done with 10,000 yen.

One method is avoiding electricity. The device I'm holding in the photo is a demo piece – if the string and

Example of OSV use at a subway construction site in Bangalore, India. It displays the effects of the open-cut site on the adjoining building for nearby residents to see (blue lights show that the effect is small)



springs detect a slip, the needle moves on the dial. This can be used as a sensor, with zero running costs.

Another interesting thing about this device is that the plastic at the base of the dial is split into blue, yellow and red parts. If you attach optical fibers behind this, a different color will light up based on the needle movement. By doing this, just by seeing what color the optical fiber is, you can tell if anything is wrong even from off-site. And we get the light for free [laughs].

Of course, any company realizes straight away that something this simple with zero electricity isn't going to make a profit [laughs]. We often talk about the possibility of making a business model that increases profits by producing them overseas.

Wow, the color really does change.

In this case you can tell by looking, but if we attach it to a light sensor it can pick up small changes too. You could set up two optical fibers, one that emits light and one that picks up light, and stick them in the ground. If

nothing happens the light won't change, but if even a particle moves at the end of the optical fiber, the light will be reflected back differently. You can get data that is small but important in predicting landslides.

Sensors and computers use electricity, but optical fibers are plastic, so there's no concern about electrical issues. You can stick them anywhere, even in the ocean. We used them in a study measuring ocean sand movement with the Japan Agency for Marine-Earth Science and Technology, and we're involved in research measuring membrane contamination too.

An OSV that anyone can use

It's not just for construction sites then. What other uses does it have?

One idea is a homework kit. OSV is becoming simpler and simpler, and it could be used for summer break homework. If children learn how



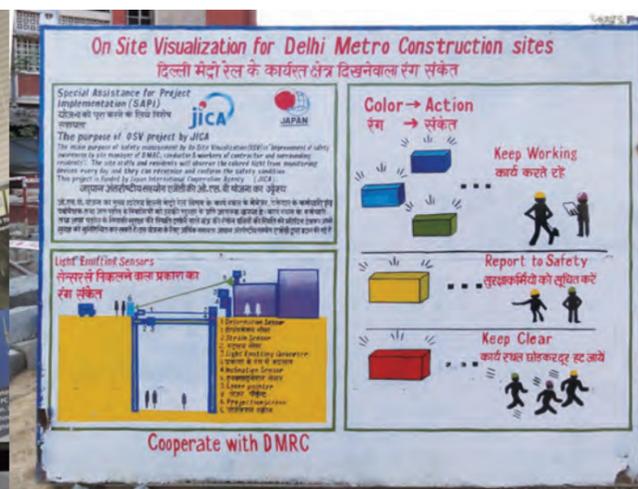
easily they can detect problems and share information, they'll be more aware about accident prevention. It's something everyone can do, not just a difficult university-level research topic.

Houses can be crushed by landslides, and there are dangerous slopes all over Japan. I want people to be able to buy OSV devices at shops if they're worried about the mountain behind their home. They can be used for so many things – the next issue is telling people about them.

The ideal is to create an environment in which you can obtain the information necessary to protect yourself just by looking around you. Transmitting all the data in real time. Accidents will definitely decrease if we can get even one step closer to that point.



An OSV demo model that uses zero electricity (as explained in the interview). The black line in his right hand is an optical fiber. Color differences can be observed for up to 100 meters in length.



↑ An OSV explanation board for a subway construction site in New Delhi, India. The safe response to each color is written in English and Hindi.

Kobe University's traditional strengths in the social sciences are embodied by our Research Institute for Economics and Business Administration (RIEB). Founded in 1919 as the Commercial Research Institute at the Kobe Higher Commercial School, it is the oldest national university-affiliated research institute for social sciences in Japan. Even its location carries the weight of history – the stately Kanematsu Memorial Hall (built in 1934) is one of Japan's Registered Tangible Cultural Properties.

The Institute stores and manages huge quantities of corporate historical materials, and in 2014 it was also designated as a Satellite Museum of Historical Computers by the Information Processing Society of Japan. It houses 28 historically important devices acquired during and after the war, such as Japan's first punch card system.

As well as its stores of historical documents and equipment, the Institute is also characterized by an international outlook. Director Professor Takashi Kamihigashi notes "We have a long tradition of internationalism. In as early as 1938, our predecessors established a South America collection in the library and published the first issue of The Journal of the Kobe University of Commerce [...] The tradition of publishing journals written in English has continued ever since". Its researchers look at globalization in business and economics, including the development of international economics, global finance and macroeconomics, international competitiveness in Japanese companies, and theory and practice in accounting systems.



Research institute applies hi-tech analysis to social sciences

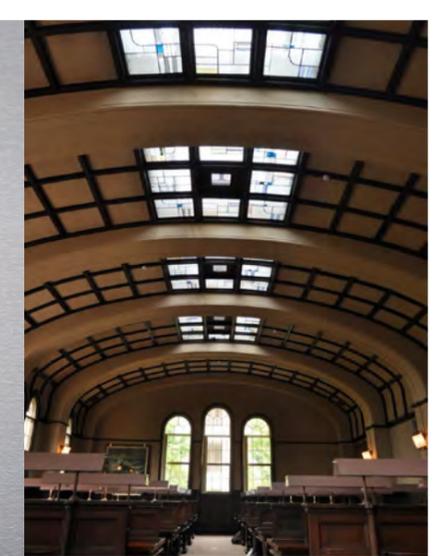
Founder of the original Commercial Research Institute and first President of the Kobe Higher Commercial School, Professor MIZUSHIMA Tetsuya emphasized the importance of "harmony in theory and practice". Based on this philosophy, the Commercial Research Institute set out in its charter the dual goals of academic advancement and commercial development. RIEB remains committed to these roots, aiming to dramatically advance scholarship while promoting the stable development of international society and sustainable growth of Japan's economy.

In 2019 the Institute will celebrate its 100 year anniversary. We will continue to actively engage with the research community, industry and civic society in order to reach our full potential. To mark its 100th year, we will analyze trends in society, economics and business, based on large-scale simulations using big data, supercomputers and a database of research materials. We also plan to publish an international academic journal promoting interdisciplinary research based on a combination of social and computational science.

Gateway to Success in Global Business

Global Master's Programs

Graduate School of Law



Graduate School of Business Administration

The Global Master's Programs (GMAPs) started in April 2015, established by the three graduate schools of Law, Economics and Business Administration for students who wish to work in international businesses. The programs all start with a combined one-year course to study basic subjects related to Law, Economics and Business Administration, followed by a one-year course at each graduate school for specialized programs connecting to practical business.

GMAPs have three important features:

- (1) All lectures are conducted in English only;
- (2) They are interdisciplinary programs with an emphasis on Law, Economics and Business Administration.
- (3) They include short-term training programs or courses such as domestic or international internships and summer school.

The programs offer lectures with small class sizes taught by world-renowned researchers, enabling students to better understand the issues that arise in global society. We also invite business leaders and legal professionals to equip students with the knowledge and talent necessary to engage with global businesses.

Students in the Graduate School of Law can participate in international moot competitions. The program organizes regional moots to give students the opportunity

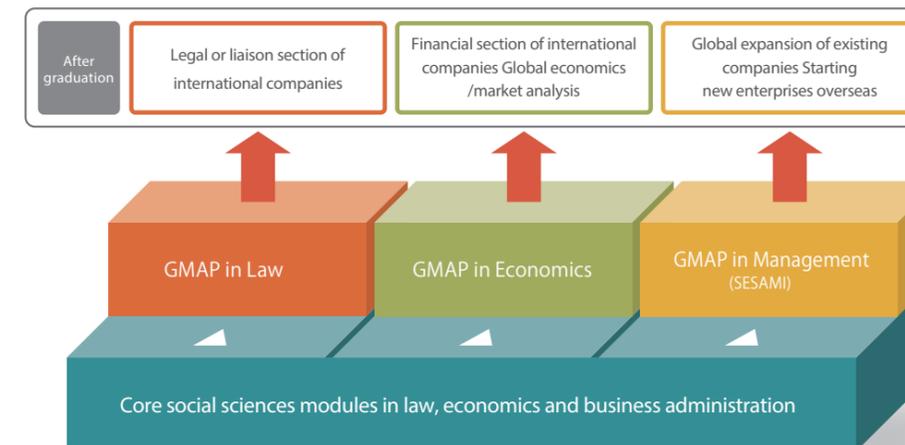
to practice what they have learned and better prepare for the international competitions. The GMAP in Law also includes a summer school named Kobe SALAD (Summer School of Asian Law and Dispute Management) dedicated to the younger generation in Asia.

Participants in the Graduate School of Economics can experience an international or domestic internship after gaining basic knowledge in the social sciences. They will also carry out research with close support from their supervisors in specialized areas such as Economics of Disaster Management and Comparative Economic History.

The GMAP in Management, also named SESAMI (Strategic Entrepreneurship and Sustainability Alliance Management Initiatives) Program focuses on three areas: 1) Strategic Entrepreneurship, 2) Sustainability Alliance Management and 3) Strategic Management. During the second year of the master's program students conduct research projects with international companies to develop practical problem-solving abilities.

We have expanded our international collaboration to carry out this program. We also welcome exchange students from our partner universities and this has become one of our most popular programs for international students.

Graduate School of Economics



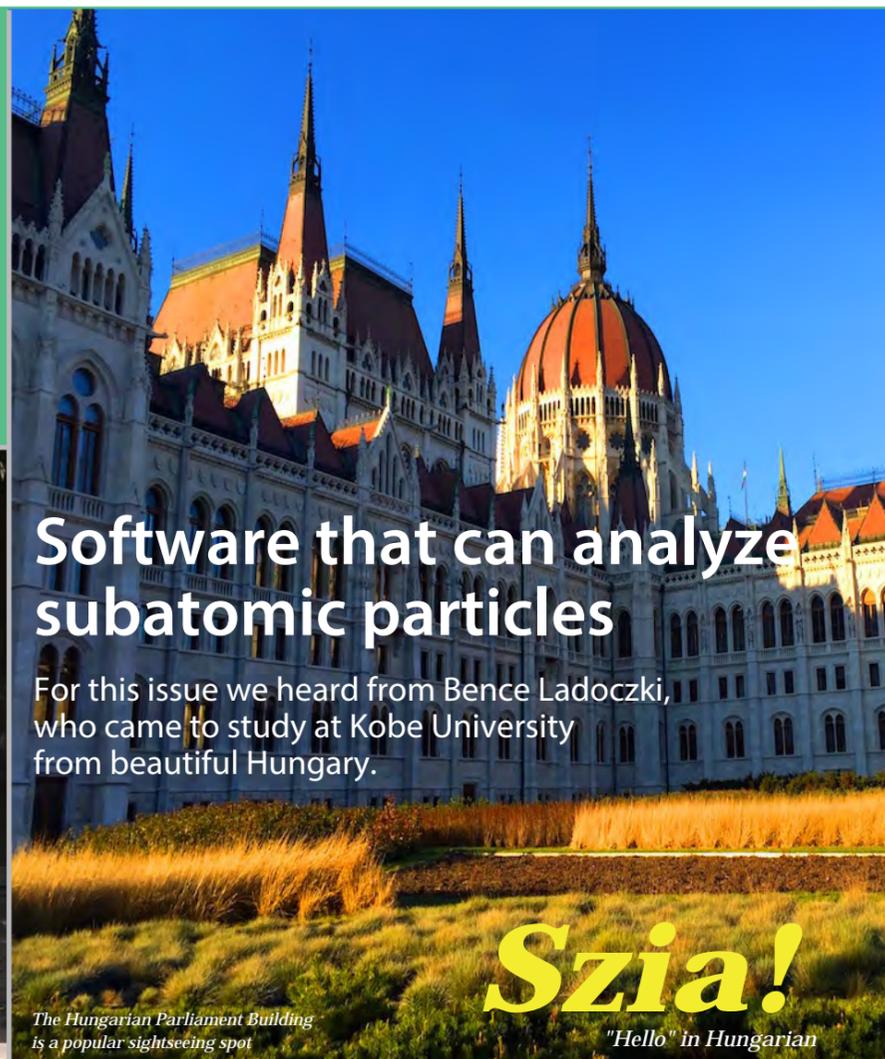
International voices

Approximately 1,200 international students from countries around the world are currently studying at Kobe University. In this corner, our international students introduce their native countries and offer some insights on studying abroad in Japan.



Bence LADOCZKI

2nd year Masters student at the Graduate School of System Informatics. Originally from Hungary, he came to Kobe University as a research student in October 2014. Favorite Japanese word: dekokoko (uneven, bumpy).



Software that can analyze subatomic particles

For this issue we heard from Bence Ladoczki, who came to study at Kobe University from beautiful Hungary.

Szia!

The Hungarian Parliament Building is a popular sightseeing spot

"Hello" in Hungarian

Tell us about your current research topic

My topic is quantum chemistry. Simply put, I am researching the development of software that can calculate the electronic structure of molecules and atoms. Using a mixture of chemistry, physics, mathematics and ICT, I spend every day doing numerical calculations to solve differential equations. I come up with the calculation methods myself, and I test the completed programs to see if the results are correct. The results don't just have to be correct - we are also trying to improve the speed of the calculations. It's an uphill battle, but I have to do my best. I don't stay overnight in my lab though! I arrive early in the morning, and make sure I go home every night [laughs].



Hungary

A republic located in central Europe and an EU member state.

Population: approximately 9.9 million.
Capital: Budapest.

The country is dominated by the Great Hungarian Plain. In the past it was invaded and settled by various different ethnic groups.

What were you doing before you came to Kobe University?

It's related to my current research. I spent four years as an undergraduate researching electronic structures at the Budapest University of Technology and Economics BME Faculty of Electrical Engineering and Informatics. My topic was revealing the electron structures of atoms and molecules by solving partial differential equations. Research on ways of solving the many-body problem has been going on for a long time, because if the electronic state is calculated accurately then various chemical phenomena can be explained. Calculation time differs depending on the size of the atom or molecule, so we need low-cost algorithms, or programs that can calculate quickly. I developed a piece of software that calculates two-electron integrals for the Multi-Reference Coupled Cluster Algorithm. My program's calculation speed is faster than most of the quantum chemistry software used at the moment.



St. Stephen's Basilica

Tell us why you chose Kobe University

To study quantum chemistry you need software, and computers that can run that software, but there wasn't much large-scale computing equipment in my research lab in Budapest. When I looked online, I learned about the K supercomputer in Japan. I wanted to develop a program for the K supercomputer (using parallelization) so I decided to study in Japan. Kobe University students can use the K supercomputer, so I realized that if I study here then I can pursue my goals. It also turned out that a friend of my supervisor in Hungary knows my supervisor in Kobe - it's a small world - and that was another connection that led me to choose Kobe University.



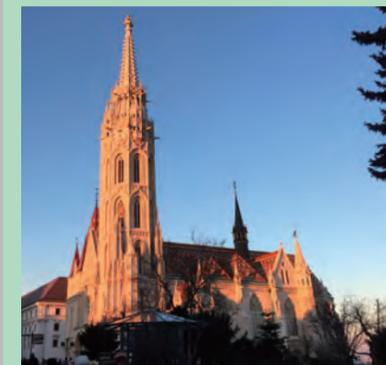
Hungarian stew

What is Hungarian food like?

Our staple foods are potatoes, pasta and bread. We only eat rice about once or twice a week. There are many different kinds of stews and soups, and we eat them a lot. Not many people know this, but Hungary is a major producer of paprika. We dry it, make it into powder, and use it in stews and other dishes. I love Japanese food too - noodle stir-fry, Japanese-style barbeque, ramen, sushi.

Your Japanese is really good. How did you learn the language?

I learned some Japanese while I was at university in Hungary, then after graduating from my bachelor's degree I studied Japanese intensively for half a year. I went to language school twice a week, and hired a Japanese tutor to teach me once or twice a week too. I understand most of the grammar, but it's hard to improve at everyday conversation... When I first arrived in Japan I could only speak English, so I found it hard to talk to Japanese students. But Japanese is interesting, and I feel like I've gradually improved by



Matthias Church

What's it like being a student in Kobe?

I study hard, but I go on a lot of trips too - Tokyo, Nara, Shirahama in Wakayama. In Nara I visited temples, like Todaiji, and played with the deer. I like Japanese beer, and I often go for a drink with my lab partners. I also go swimming to stay healthy. My friends in the lab are very enthusiastic about their research, which is inspiring.



Bence with his lab group



Hungarian Parliament Building

Tell us about your plans for the future

I want to carry on doing something related to my current research, so I'd like to work at a university or research institute. I'd like to continue research in quantum chemistry, and invent new materials. At the moment we've got as far as using quantum chemistry calculations to obtain electronic states of various molecules. One day I want to be able to use computers and calculation algorithms to accurately simulate larger molecules like proteins and DNA. Then I'd like to discover something beyond the field of quantum chemistry, something that benefits humanity.

Fruitful enterprise in rural Kenya

The east African nation of Kenya has a strong agricultural base, but in some regions over 40% of mangoes are thrown away after harvesting, and farmers find it hard to secure stable buyers for their produce. Ms. YAMAMOTO Ayumi established a dried fruits processing company in Kenya, aiming to create locally-based sustainable enterprise.



YAMAMOTO Ayumi

Born in 1980 in Kashiwara, Osaka. Kobe University School of Agriculture graduate. In 2011 she started work in Machakos, Kenya supporting fruit harvesting as a Japan Overseas Cooperation Volunteer (JOCV). In 2014 she set up and represents "Kenya Fruits Solutions Ltd", a dried fruits processing company.



What sort of company is Kenya Fruits Solutions?

We deal in mangoes and pineapples, buying fruit from local farmers to process and sell. Fruit is very seasonal, so during the harvest season it floods the domestic markets and unsold fruit often goes bad.

Tell us why you joined the Faculty of Agriculture

When I was in high school I had the opportunity to go on a study tour to the Philippines with my parents. We visited a slum there, and I was shocked that children the same age as me didn't have enough to eat. I realized that food equals life, and I decided that I wanted to pursue a career related to food and agriculture in developing countries.

What sort of things did you study?

I transferred to Kobe University in my 3rd year, and joined the crop science research laboratory. My graduation thesis was a survey

comparing the photosynthetic characteristics of wild versus cultivated rice species. I wanted to work overseas in a job related to international cooperation or agriculture, so in my 4th year I trained at an organic farm in Hyogo prefecture. It was a very valuable experience. I still use the skills and knowledge I gained at university in my work supporting farmers in Kenya. I've deepened my understanding about farming semi-arid land since coming to Kenya and listening to the farmers' experiences, but it was my solid foundation of agricultural knowledge that enabled me to look for what was needed, grasp the situation, and set things in motion when I arrived in rural Kenya.



Interview by
NAKAMURA Kunio
(Student PR Team)

Faculty of Engineering
Department of Electrical
and Electronic
Engineering 4th year



When did you first decided to get involved in supporting farmers in Africa?

When I became a Japan Overseas Cooperation Volunteer [JOCV] in 2011. I'd applied for the program as a student, but I wasn't accepted. After graduating I worked as a lecturer in an agricultural high school, then worked in a private company, and I stopped thinking much about working overseas. But when I turned 30, I saw an ad in a train for the Japan Overseas Cooperation Volunteers. I suddenly remembered my dreams of going to Africa when I was a student, and when I applied this time they accepted me.

It must have been fate! So you joined the Japan Overseas Cooperation Volunteers and went to Kenya.

Yes. It was my first time in Kenya, and the capital of Nairobi was a lot more developed than I'd imagined. People spoke English, there was good infrastructure, and it was easier to live there than I'd thought it would be.

I was posted there to work as a Community Development Officer. My job was to learn about the needs and problems within a community, and work with them to find solutions.

Why did you decide to specialize in mangoes?

In 2011, the year I went to Kenya, there was a severe drought in east Africa, and everywhere I saw the staple

crops of maize and beans withering due to lack of rainfall. The Kenyan Ministry of Agriculture recommended drought-resistant crops, so I thought that mango trees, which are fairly drought-tolerant, could contribute to the income and nutrition of local farmers. (Other drought-resistant crops include sorghum and cowpea.) Mangoes are suited to Kenya's semi-arid regions, but because there were no stable buyers, and middlemen had been buying them cheaply for many years, not much importance was placed on them as an income source for farmers in my area. I thought that if we could buy the mangoes at a fair price, process and sell them, this could be an source of revenue for farmers and help to combat poverty.

So you started a business.

Yes. But I don't think I could've launched the company alone. I met someone who had become a successful entrepreneur while working as a JOCV in Kenya. Her words – "Just because it's Africa, doesn't mean that it's not possible" – resonated with me, and I resolved to act. "I'll try it for half a year, and

see how it goes" I thought when I set up the company. If you worry too much and don't start moving, you can't get anything done. The first step is to try. In my case, I was lucky to meet people who helped me and lent me their knowledge. Another JOCV posted to the same region as me is helping me out in the Japan Office of this program. I'm very grateful for the human connections that made this possible.

What's the next step?

I want to expand the business and increase the amount of fruit we're purchasing from farmers and the number of employees. Living and working here in Kenya, I'm often surprised at the difference in values. Things that Japanese people take for granted don't apply here. Things don't go according to plan, and they often take more time than I think. To start with I was overseeing the processing myself, then I began to entrust it to Kenyan employees who knew about food processing. I want to carry on helping to sustainably produce quality goods.



150 years of Japan-Belgium friendship

International Collaboration

Europe

Symposium celebrating 150 years of Japan-Belgium friendship; Academic Lunch with Belgian King and Queen

In October 2015, Their Majesties King Philippe and Queen Mathilde of Belgium visited Japan to commemorate 150 years of Belgo-Japanese friendship. As part of the itinerary, on October 14 Kobe University invited a group of Belgian university rectors to a symposium at the Kobe University Integrated Research Center. The event focused on the results of international collaborative research projects with four of our partner institutions in Belgium.

The symposium comprised four sessions: joint research on cancer with the University of Liège, joint research with Saint-Louis University on poverty, joint research on migrants and security issues with KU Leuven, and interdisciplinary research on globalization with Ghent University. Symposium attendees included members of the Japanese and Belgian governments, researchers, and students.

Following the symposium, the participants moved to the Hilton Osaka where an Academic Lunch was held with Their Majesties the King and Queen of Belgium. During this event, Professor YOSHIDA gave a report of the symposium to the King and the Queen. Finally, two students from Kobe University and the University of Liège talked about their study abroad experiences in Belgium and Japan.

This event commemorating 150 years of Belgo-Japanese friendship is also a testament to our University's strong presence in Belgium, owing to the activities of the Kobe University Brussels European Centre (KUBEC) established in September 2010.



Advisory Board meeting

Activities at the Kobe University Brussels European Centre (KUBEC)

Established in September 2010, the Kobe University Brussels European Office is the first European centre founded in Brussels by a Japanese university. It is our primary base for strengthening collaboration in education and research between Japan and Europe.

Advisory Board meeting

The University holds Advisory Board meetings in its overseas offices to further enhance our governance. On November 7, 2016, we held an Advisory Board meeting at KUBEC on topics such as initiatives to support research and international activities, drawing comparisons between Kobe University and European organizations. The meeting was attended by board members His Excellency Mr. Herman Van Rompuy (former President of the European Council), Dr. Michael Reiterer (Senior Advisor in Asia and Pacific Department, European External Action Service), Professor Roger Goodman (Head of Social Sciences Division, University of Oxford), and Professor Jiří Drahoš (Chairman of the Czech Academy of Sciences).

The 7th Kobe University Brussels European Centre Symposium "Emerging Sciences and a Changing World: EU-Japan in Transition"

On November 8, the 7th Kobe University Brussels European Centre Symposium "Emerging Sciences and a Changing World: EU-Japan in Transition" was held.

The event opened with addresses from Professor TAKEDA Hiroshi (President, Kobe University), Professor

Caroline Pauwels (Rector, Vrije Universiteit Brussel [VUB]), His Excellency Mr. Kazuo Kodama (Ambassador of Japan to the European Union), and Mr. Wolfgang Burtscher (Deputy Director-General, Directorate-General for Research and Innovation, European Commission) to express their hopes for further research collaboration between Japan and Europe.

Four parallel sessions were organized on the themes of data science, cultural diversity, migration and security, and particle physics. Japanese and European researchers presented the latest results of cutting-edge research and discussed future opportunities for collaboration. The symposium, which provided an opportunity to exchange information on current topics and dealt with common issues shared by Japan and Europe, was positively received by both Japanese and Belgian officials.

This year marked the first time that the symposium was held in collaboration with Vrije Universiteit Brussel (VUB), where KUBEC is located. KUBEC relocated to the VUB international office buildings in July 2015 in order to enhance its role as a base for collaboration in education and research between Japan and Europe by forming closer ties with Belgian universities. This symposium is part of our initiative to strengthen collaboration with VUB.



Caroline Pauwels (Vrije University Brussels Rector), Professor TAKEDA Hiroshi (Kobe University President), His Excellency Mr. Kazuo Kodama (Ambassador of Japan to the European Union), Mr. Wolfgang Burtscher (Deputy Director General, Directorate-General for Research and Innovation, European Commission)

The 7th Kobe University Brussels European Centre Symposium



Forum for Leaders of Japanese Studies

Asia

Forum for Leaders of Japanese Studies

On September 23, the Fourth Annual Conference: the Forum for Leaders of Japanese Studies was held at Kobe University. Six leading researchers in Japanese Studies from major Asian universities presented on and discussed the theme of “Japanese Studies as Public Goods” from a range of perspectives.

This year for the first time the event was co-organized with the Kobe University Educational Program on Current Japan (KU-EPOCJ) Administrative Committee and the European Association for Japanese Studies (EAJS) as part of the KU-EPOCJ Kick-off Symposium. The Kobe University Educational Program on Current Japan is an English-taught course open to exchange students (Special Auditing Students) focusing on

Japanese culture and society. After the keynote speech by Professor EYAL Ben-Ari (Director of the Kinneret Center on Peace, Security and Society, Kinneret Academic College) titled “Japanese Studies in Comparative Perspective: How are Area/Regional Studies Constructed?”, three sessions were organized around the themes of “An Aging Society with a Low Birthrate”, “Migration and Symbiosis” and “Technology and Ethics”.

This joint event contributed to increasing academic exchange between Japanese studies researchers in Asia, Europe and countries around the world.

Kobe University Academic Research and Education Forum (KUAREF) in Indonesia

The Kobe University Academic Research and Education Forum (KUAREF) in Indonesia was co-hosted with Universitas Gadjah Mada and Universitas Indonesia on December 21 and 23, 2016. This symposium is the successor of the annual Kobe University Global-Link Forum (KUGL), which aimed to raise the University’s profile overseas by strengthening our ties with the international alumni association network and partner institutions. This year the first Kobe University Academic Research and Education Forum was held as an academic event with a renewed focus on research, focusing on the fields of language, law and technology. Over 250 people attended the preconference event and symposium, including many Universitas Indonesia staff

and students. After the symposium, a reception and alumni networking event took place, attended by former students of Kobe University who currently work at companies and research institutions in Indonesia. This provided a valuable opportunity for alumni to talk about their memories of Kobe University and their work after graduation.

With the recent rapid economic development in Asia, Kobe University is taking the initiative to deepen cooperative relations with Asian countries in order to tackle social challenges together. The annual KUAREF symposia will continue to contribute to our network with alumni and researchers in this region.



Kobe University Academic Research and Education Forum (KUAREF)

Social Media

Kobe University is on social media!



KobeU_Global



Kobe University Global



Kobe University



Kobe University



◆ **Let us know what you think about our English website**

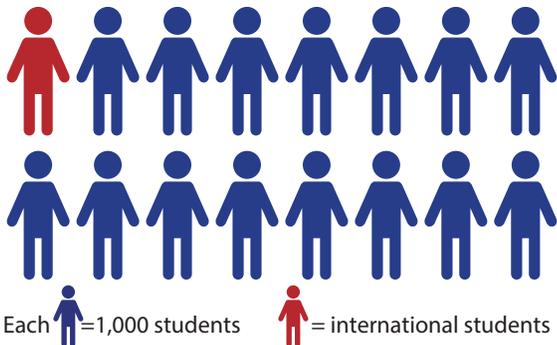
Feedback is always welcome. Please let us know your opinion by filling in our 3-minute questionnaire about the new website: http://www.kobe-u.ac.jp/en/about_us/q.html



KOBE UNIVERSITY

Founded in 1902

4 campuses | 10 faculties | 15 graduate schools



16,356 students

including 1,196 international students comprising over 85 nationalities

2,583 staff

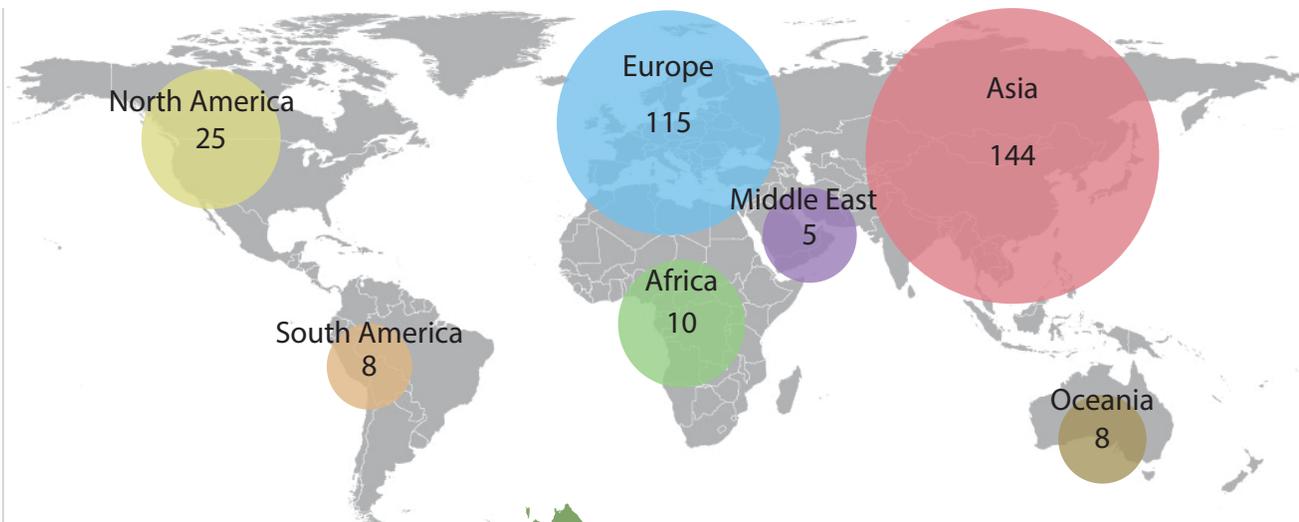
including 1,319 teaching staff

1,145 administrative staff

119 faculty staff in attached schools

Partner Universities

Kobe University currently has 317 partner institutions in 56 countries/regions.



Faculties and Graduate Schools

- Letters / Humanities
 - Intercultural Studies
 - Human Development / Human Development and Environment
 - Law
 - Economics
 - Business Administration
 - Science
 - Medicine
 - Health Sciences
 - Engineering
 - System Informatics
 - Agriculture / Agricultural Science
 - Maritime Sciences
 - International Cooperation Studies
 - Science, Technology and Innovation
- (NEW!) Global Human Sciences**

All data as of November 1, 2016