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One hundred years of Kyushu University: providing the inspiration for invigorating to face the next one hundred years. This calligraphy was done by the world-famous calligrapher Koji Kakinuma.

**Dr. Petros Sofronis** Director, International Institute for Carbon-Neutral Energy Research (FCNER) Professor, University of Illinois at Urbana-Champaign

**Dr. Kotoku Kurachi** Executive Vice President, Kyushu University



Aiming to become a Global Hub for Research	
and Education representing Asia	
-Global 30 Initiatives11	

From Kyushu University to the World... And from the World to Kyushu University

A Comprehensive International Student
Support Framework 14
Unique Overseas Study Programs16



TOPICS	1. Signing a Memorandum of Understanding with the Ministry of Science and Technology of Nepal	·17
	2. An Honorary Doctorate for Robert Huang ······	.17
	3. Hosting of "Islam Week"·····	.18
	4. A Visit from Professor K. Barry Sharpless, Nobel Laureate	.18
	5. A Soccer Tournament for International Students on Ito Campus	.19
	6. Establishing of a Chair Sponsored by Air Liquide	.19
	7. Honorary title of "Distinguished University Professor" discerned to Professor Muhammad Yunus	
	8. Opening the Center for Japan–Egypt Cooperation	
	in Science and Technology	·21
	9. The Second Japan–UK Higher Education Symposium	·21
	10. Signing an Academic Exchange Agreement with the Cambodian Government	.22

2



## Kyushu University International Institute for Carbon-Neutral Energy Research (I<sup>2</sup>CNER)

Director : Petros Sofronis

## Grand Highway for a Carbon-Neutral Energy Fueled World

The mission of I<sup>2</sup>CNER is to contribute to the creation of a sustainable and environmentally friendly society by advancing fundamental science to reduce CO<sub>2</sub> emissions and establish a non-fossil based energy carrier system.

## Purpose of the Research

As the newest initiative of the WPI, the objective of I<sup>2</sup>CNER is to develop the science required to eliminate barriers and enable the technological breakthroughs necessary for a hydrogen-based society and efficient CO<sub>2</sub> capture and sequestration. The Institute's research agenda covers the areas of hydrogen production and storage; hydrogen tolerant materials; fuel cells; "greening" chemical reactions and catalysts; CO<sub>2</sub> capture; as well as oceanic and geological sequestration. This broad-based approach cuts across the boundaries of chemistry, physics, materials science, mechanics, geoscience, oceanic science, and biomimetics bridging multi-dimensional spatial and temporal scales

for phenomena occurring at the interface between materials and hydrogen, oxygen, and CO<sub>2</sub>.

## Features of the Institute

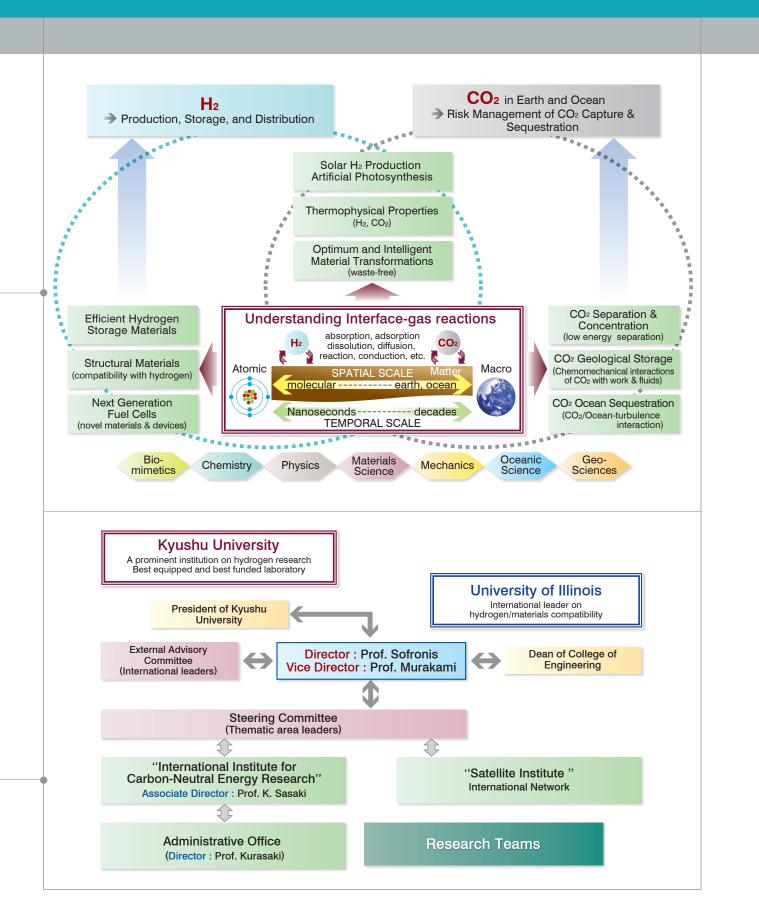
Launched by Kyushu University, Japan in collaboration with the University of Illinois at Urbana-Champaign, US, the I<sup>2</sup>CNER seeks to provide the resources, facilities and environment needed to attract and retain the top national and international scientists and engineers from a wide range of disciplines. Additionally, the Institute establishes collaborative programs, including joint research activities and personnel exchanges with national and international research institutions and universities. Managed and led by American director, the I<sup>2</sup>CNER represents a paradigm shift for Japanese research centers.



## Organizational Structure-

The Institute's main facility is located at the Ito campus of Kyushu University and has a Satellite Institute at the University of Illinois at Urbana-Champaign. The research organization is theme-based with the director providing leadership and overall management of the Institute in consultation with its Steering Committee. All aspects of I<sup>2</sup>CNER are reviewed annually by the External Advisory Committee and the Institute operates in accordance with the highest academic standards.





# SPECIAL INTERVIEW

Kyushu University has just established the International Institute for Carbon-Neutral Energy Research (I<sup>2</sup>CNER). This epoch-making research institute has been designated as a research institute of the World Premier International Research Center Initiative (WPI), which is supported by the Ministry of Education, Culture, Sports, Science and Technology. The director of I<sup>2</sup>CNER is Dr. Petros Sofronis, who is a professor at the University of Illinois. On the day following the opening ceremony, Executive Vice President Dr.Kotoku Kurachi interviewed Dr. Sofronis at KYUDAI Ito Campus.



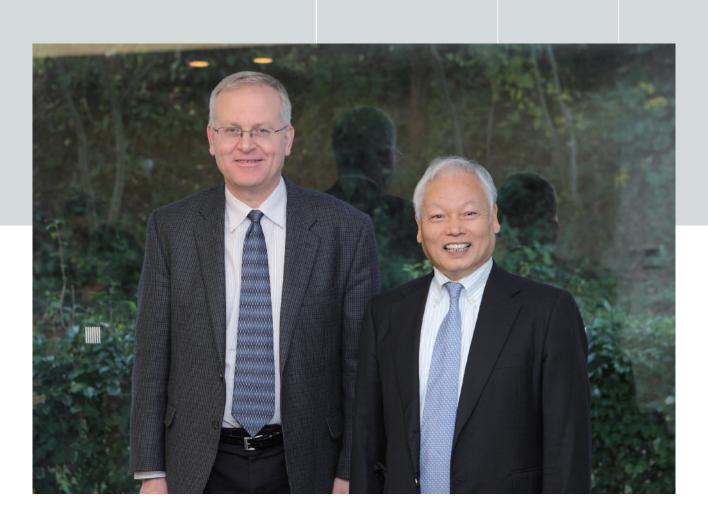
## Dr. Petros Sofronis

Director, International Institute for Carbon-Neutral Energy Research (I<sup>2</sup>CNER) Professor, University of Illinois at Urbana-Champaign



## Dr. Kotoku Kurachi

Executive Vice President, Kyushu University



Kotoku Kurachi: It's a great pleasure to see you, Dr. Sofronis. All of us at Kyushu University are delighted to have this new institute, and to have you as the director. To start, I'd like to ask you briefly about your background. How did you end up in the United States? I know you were born in Greece, and then moved to the U.S.

Petros Sofronis: When I was a child, I remember hearing about Neil Armstrong's first steps on the moon, via a live broadcast on Greek radio. Ever since that time, the U.S had been a kind of dream, a fascination for me. Later, as a senior in the Mechanical Engineering Department of the Aristotle University of Thessaloniki (AUT), Greece's second city, I had the good fortune to join an advanced course in mechanics taught by Prof. G. Lianis, a faculty member who had been at Purdue University in the U.S prior to joining AUT. I aced the course, and he called me into his office to ask if I wanted to continue my post-graduate studies in the U.S. This was the opportunity that I had waited for all my life, so I grabbed it and arrived at the University of Illinois with one suitcase full of clothes and \$500. I was pursuing the American dream.

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KK: When was that?
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PS: That was 1981. I joined the graduate program at the University of Illinois, and started carrying out my PhD research under the supervision of Prof. R. McMeeking. After that, I moved to the University of California at Santa Barbara, where again I had the privilege of working in the group of a world authority in materials science, Prof. A. Evans. I spent a lot of time in Santa Barbara, specializing in mechanics and materials for high temperature applications. In 1991, I joined the faculty of the University of Illinois in Urbana-Champaign, and became a professor there. KK: I moved to the U.S. in 1970 as a post-doc fellow, and ended up staying over 30 years. I returned to Japan 10 years ago when the Japanese government asked me to head a research center in Tukuba. I joined Kyushu University last April.

PS: We have similar histories.



# I<sup>2</sup>CNER is seeking to provide society with energy solutions through fundamental science.

KK: Let's move on to I<sup>2</sup>CNER, the research institute. Can you briefly summarize the long term and medium term goals? PS: I<sup>2</sup>CNER is an institute that will carry out fundamental science research. This is one of our missions. At the same time, I<sup>2</sup>CNER is seeking to provide society with energy solutions through basic science and solve problems related to the roadblocks to a hydrogen economy and safe carbon capture and sequestration. An immediate goal of I<sup>2</sup>CNER, for example, will be to assist the international community, including the U.S., Europe and Japan, in setting codes and standards for the hydrogen economy. Japan, for instance, is thinking of launching the first fuel cell vehicles in 2015. To have all these fuel cell vehicles in the roads, we will need codes and standards to ascertain whether a specific material is acceptable or not, whether it is resistant or less resistant to the effects of hydrogen. This is an immediate goal. KK: What is your major obstacle now in fuel cell technology,

particularly with a fuel cell driven car? PS: One of the major issues for the fuel-cell-car economy is the production of hydrogen. Hydrogen is not something you find freely in nature, and it's not an energy source like petroleum. If you extract petroleum from nature, you have an energy source. Hydrogen is what we call an energy carrier. It is something we must produce ourselves. And as we produce it, it carries energy that we can extract from it. KK: Aside from technology improvements on the fuel cells themselves, what kinds of social infrastructure will you need, besides hydrogen stations and such?

**PS:** I think there are two important things, aside from production. To serve society, we will need to distribute hydrogen to houses and other destinations. We need a transport system, and both the U.S. Department of Energy and Japan are working on hydrogen distribution systems. We have projects in the U.S. and here at HYDROGENIUS where we study materials that can be used to transport hydrogen around the country. The transport network we need will be an enormous but essential infrastructure investment. In our houses, we will use hydrogen instead of natural gas. This is an area where society needs to make an investment in the future.



Another important point is the education of the public, to increase public awareness of hydrogen and what it is. We need the public's trust in hydrogen energy. The Department of Energy already has a strong program in place to educate the public. At our I<sup>2</sup>CNER here, we have a division to which we will allocate a portion of our budget to public education. We will use accessible terms for the technology, such as those used by Scientific American, so that the public can easily understand it.

KK: Regarding production, is hydrogen generated by electrolysis of water?

**PS**: That's one way. Generally speaking, there are three ways to produce hydrogen today. One way is by the electrolysis you mentioned, splitting water. Another way is by something called photolysis. Here at I<sup>2</sup>CNER, we have a division for artificial photosynthesis, which is still a technology for the future. The third way, a very interesting way that we may investigate within I<sup>2</sup>CNER in the future, relates to biological means. Interestingly, there are some bacteria that, by means of their metabolism, produce hydrogen - like trees, where as part of the photosynthesis that the tree uses to feed itself, it also produces precious oxygen. Such a biological approach may turn out to be fruitful. KK: I now would like to move on to the subject of carbon

dioxide recovery and sequestration, and how to convert it to a harmless substance...

**PS:** Let me give you one thought. As I said, artificial synthesis is a technology of the future. It is beautiful work, but it may take time. However, for I<sup>2</sup>CNER to have immediate impact we need to address an issue that is here now, and CO<sub>2</sub> is such an issue. To address global warming, we need to mitigate our CO<sub>2</sub> production. So what can we do? How can we get our science to provide solutions to the CO<sub>2</sub> problem? This is something we need to work on.

# We will adopt the U.S. academic culture.

KK: May I turn a little bit to the issue of recruiting scientists? You are recruiting top-notch scientists for I<sup>2</sup>CNER. I understand how you can attract young scientists, because of the attractive set up here, but how will you be able to attract senior people who you may need to make I<sup>2</sup>CNER a truly world premier research institute ?

**PS**: As for senior people, I can give you myself as an example. Scientifically, I am in the early senior stages of my career. How did Kyushu University manage to attract me to be part of this big effort? It was because of the presence of HYDRO-GENIUS. HYDROGENIUS is a laboratory that conducts top-notch research, and this is what attracts senior people. It is the environment that you offer. Senior scientists want to join teams where there are other active researchers and where there is a coordinated research effort towards a serious objective. Once you have this environment, you can attract senior scientists.

Another thing I'd like to emphasize is the partnership between Kyushu University and the University of Illinois. As you know, the University of Illinois is one of the top engineering schools in the world. Many senior people from this prestigious college of engineering will come to spend summers and sabbaticals here in Kyushu. In others words, we will begin to create an environment where we hope the Kyushu faculty and the University of Illinois faculty will start mingling and discussing research, and this will become known to the world through our workshops and joint publications.

KK: What do you think are the critical differences between Japanese universities and the U.S. universities with regard to performing basic research?

PS: Well, here at Kyushu University, I've noticed that you have younger assistant professors, and even associate professors, working within groups for full professors.
I would like to draw your attention to the word "for." This is something that does not happen in the U.S.
KK: That structure, which is called "Kozasei", is getting weaker these days. It used to be very rigid –we would have a professor, an associate professor and an assistant professor forming a kind of pyramid. These days, it's less like that, but we still have it.

**PS**: For this WPI in Kyushu, we are trying to avoid this type of culture, and we will adopt the U.S. academic culture. In the U.S. academic culture, the newly hired assistant professor is the future of the unit. You don't see an assistant professor as somebody who facilitates research for the senior faculty. The assistant professor is the new blood, there to invigorate the unit in a direction which may be different from the current direction of the laboratory or department. This is how we want to view assistant professors here at I<sup>2</sup>CNER.



KK: So when you construct a new building for I<sup>2</sup>CNER, you will provide space for younger professors to carry out independent research?

**PS:** Absolutely, that's the idea. The young assistant professor needs to carry out independent research, and must have a vision of where she or he wants to go. I ought to say that during my stays here at Kyushu University, I have met with assistant professors and asked them where they planned to go with their research 5 years down the road. Unfortunately, I found that some of them don't have a vision. I hesitate to say this, but I was shocked. You see, in the U.S., we would never hire a young faculty member who doesn't have a vision of where they want to be 5 years down the road.

KK: I totally agree. I spent half of my life at academia in the U.S., and there I started as an assistant professor, and moved on to full professor. I had to do everything, but I was totally free to pursue whatever I really wanted to work on.
PS: The full professor plays a role model for the young assistant professor, and acts as a mentor. The full professor tries to help the assistant professor find his wings. So, we do mentor, but we don't have young assistant professors work in our groups for us. Of course we collaborate, but the assistant professor does so on equal terms with full professors.
KK: As you know, one of the selling points of the WPI that attracted government support was to use this as a catalyst, or leverage, to reform the old education culture that is still dragging along in university education and research. We really need this reform, for reasons such as the pyramid we



discussed earlier. How do you think we should go about the reform?

**PS**: I can tell you many directions we may take, but I'll stay on two items. One way is by starting with our research center to make sure that we maintain top quality among the staff. We will have a rigorous annual review conducted by an external advisory committee, which will be composed of a group of internationally recognized scientists who are leaders in their fields. They will come here to Kyushu, review what we are doing, and make recommendations. We plan to maintain this system as a safety check as far as our quality is concerned. This is the process followed in major research centers in the U.S.

I also plan to introduce a seminar series in which students will be required to make presentations. This is something that is done quite regularly in the U.S. Young Japanese graduate students will have to put themselves in front of an audience made up of students and faculty, and present their research. This is vital. They will have to make a presentation and the other students will ask questions. This will precipitate a culture of debate, which is something that I believe has been missing here as I may infer from my interactions with the students at Kyushu University over my past 5 years of coming here.

## Students will be the next generation of researchers.

KK: In the U.S., the students will interrupt in the middle of a lecture. We have to be well prepared there, because otherwise the students will catch us (laughter).

**PS**: That's right. We want the students to challenge us. We want to cultivate free thinking in our students , because they will be the next generation of researchers. That's the idea, anyway. I believe "debate" is the key word here, because that's what is missing now.

KK: As you are aware, I<sup>2</sup>CNER is set up at Kyushu University as an independent entity, so that you can have a free hand to do whatever you think is best. We hope I<sup>2</sup>CNER will serve as a catalyst and provide leverage to reform the rest of Kyushu University. However, this may create some problems. What will you provide in the way of incentives to researchers at I<sup>2</sup>CNER?

**PS:** I believe faculty compensation and reward are very important. I believe that since I have been given the authority to help create a first-rate institution here, faculty compensation is vital. And when I say faculty compensation, I mean that in two ways. The first way refers to research resources. These resources are not distributed equally among various PIs (Principal Investigators). It's not a big pie of resources that we slice up evenly for everybody.

KK: That's what we want. But when you evaluate the achievements of the researchers to determine their compensation, it has to be based on very strict evaluation standards. Otherwise, this project would just have so much money that we would give away, and that's not what we want.

**PS**: That would be a recipe for disaster. It would promote complacency and stagnation in the academic environment. We don't want stagnation – we want vigor. That's the purpose of this institute.

KK: That's terrific. This endeavor is not just supported by two universities, but by the U.S. and Japanese governments, as well as by quite a few industries, so I believe you will be successful. I wish you the greatest success in finding a sustainable solution to our energy problems. **PS:** Thank you very much. To this end, I am now traveling around the world to disseminate the news that we have I<sup>2</sup>CNER, and that something new is happening at the Ito Campus of Kyushu University. We hope that we succeed both academically and in impacting society in multiple ways.

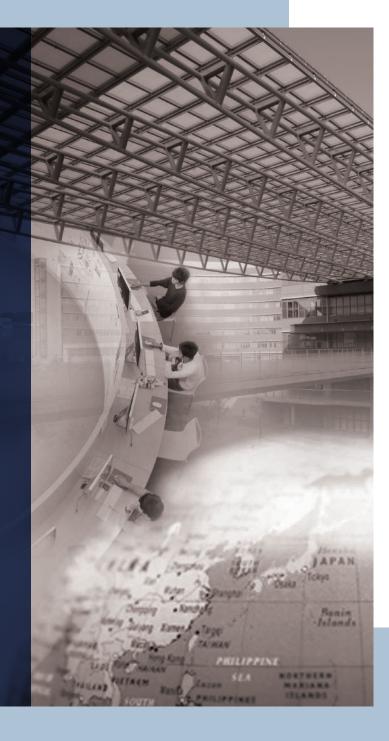
When I see, for example, a PI who manages to bring international attention to her or his field of expertise, when I see visibility and production in a PI's activities, I will reward that with more research funds. When I see a PI who doesn't have visibility or doesn't produce, then we may initially react by cutting funding.

The other compensation is salary. We are all human beings, and we expect to be rewarded for what we are doing. That reward will be commensurate with the corresponding level of activity and participation in this project. We are not going to have across the board compensation.



At the opening ceremony of  $\mathsf{I}^2\mathsf{CNER}$ 

# Aiming to become a Global Hub representing Asia — Global 30 Initiatives—



Global 30 is a project through which the Ministry of Education, Culture, Sports, Science, and Technology supports the select universities in providing highquality education and a globalized learning environment to encourage international students to come and study in Japan. This project aims to strengthen the international competitiveness of Japanese universities and provide international students with a first-rate education, as well as prepare Japanese students to be outstanding professionals with a global mindset by offering opportunities to study alongside international students. In 2009, 13 universities, including Kyushu University, were selected nationwide for this project.

# for Research and Education

## Kyushu University's Initiatives

Kyushu University's Global 30 Project takes a unified approach to internationalization throughout the university, from promotional activities to helping our international graduates find employment, on top of strengthening our function as a global hub for education and research representing the whole of Asia.

More specifically, through implementing the kinds of initiatives described below, the university has set the goal of increasing the number of international students in 2008 (approximately 1,300) to 2,300 by the end of the Global 30 Project in 2013, and eventually to 3,900 by 2020. As of November 2010, this number had already climbed to approximately 2,000 students.

#### Establishment of International Programs

For making it easier for excellent international students to study at Japanese universities under the Global 30 Project, Kyushu University has launched a number of degreegranting programs whereby students can obtain degrees through classes taught solely in English.

By the end of 2013 we will have inaugurated international programs in two of our undergraduate schools (Engineering and Agriculture) and in 17 of our graduate schools. (The total number of international programs will amount to 63, which is the highest number of such programs offered at a single university in Japan). As of January 2011, 33 programs have already been launched, and in 2010, 25 international students enrolled in undergraduate programs and 156 in postgraduate programs.



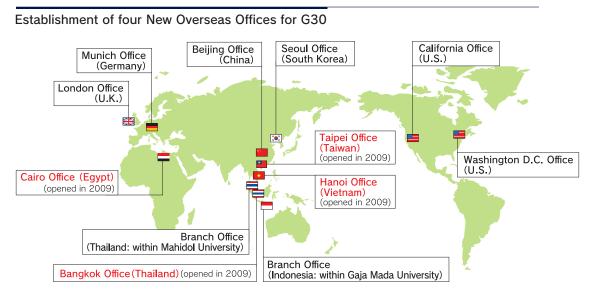
#### International Promotion

In order to attract as many excellent international students as possible, Kyushu University has designated 8 countries and regions – China, South Korea, Indonesia, Taiwan, Vietnam, Egypt, Thailand, and Australia – as target sites from which to recruit students. The university is particularly active in promoting its international undergraduate programs at high schools in these countries. In 2009, 32 staff members were dispatched overseas to promote these programs to approximately 2,700 students and guardians at over 25 high schools. In addition, in 2010, the university held orientations for studying abroad at 33 schools in 9 countries and regions, in which around 2,200 students participated.



Top: Visiting a high school in Thailand Bottom: Study abroad fair in Singapore

First entrance ceremony for an undergraduate international program



#### Establishment of Overseas Offices

While Kyushu University had had local offices that acted as hubs for the university's overseas activities, we added four new overseas offices in 2009 to promote activities under the Global 30 Project. Using these offices, the university conducts a variety of activities to recruit as many excellent international students as possible.

In line with the implementation of the G30 Project, our Cairo Office (Egypt) – set up in February 2010 – serves as an "office for the joint use of overseas universities" with the shared goal of increasing the number of international students at universities all over Japan.

#### Establishment and Consolidation of International Student Support Framework

To encourage international students and researchers to come to Japan and engage in their studies and research without any worries, we have established the International Student and Researcher Support Center in July 2009; the newly established center seeks to provide the socalled one-stop service for the university's international community. (Please see page 9 for more details).

#### Internationalization of Campuses

In order to carry out the Global 30 initiatives as planned and to promote globalization, we have constructed frameworks and systems that will enable us to engage all our teaching and administrative staff as one team, as it were. In addition to creating English versions of universityrelated documents and improving the English skills of administrators, the university actively employs outstanding academics from all over the world to teach the international courses; in that way, our Japanese and non-Japanese teaching staff will learn from one other to spur the university further towards its mission of serving as a global center of research and education.

### The Future of Kyushu University's Internationalization

At present, Kyushu University's Global 30 Project is progressing smoothly and producing outstanding results. The number of international students has increased to approximately 2,000 as of November 2010 and the university is expected to fully accomplish its target of 2,300 by the end of 2013.

We will continue with the path of internationalization. Together with other universities – especially other Global 30 sites – we will, among other things, offer career support for international students with the help of the business community, and seek to benefit other Japanese universities by passing knowledge and experience from the Global 30 Project on to them.

※ Although Global 30 began in 2009 as a project to establish hubs for internationalization, it was restructured in 2011, and continues on as a project aimed at forming networks for the internationalization of universities all over Japan. From Kyushu University to the World And from the World to Kyushu University

## A Comprehensive International Student Support Framework

Supporting International Student Admissions and Daily Lives

## International Student and Researcher Support Center

A huge increase is expected in the number of international students and researchers in the future due to an increase in the number of international student and teaching staff being cited as part of the university's 2nd Mid-term Targets and Mid-term Plan, as well as the university's adoption of the G30 Project. The university established the Kyushu University International Student and Researcher Support Center (hereafter referred to as "Support Center") to provide support for overseas students and teaching staff in their daily lives and provide comprehensive support for overseas students and researchers.

The Support Center provides a range of comprehensive support services for students and researchers coming to Japan, including help with visa procedures, a shuttle bus service, and housing arrangements. In addition to several orientations following arrival, support is provided for procedures that are necessary for the new start in Japan, including alien registration and the opening of bank accounts.

The university also provides services aimed at supporting daily life, such as the provision of contacts at each campus where students can go for a range of consultations.



Meeting international students at the airport, October 2010. Around 350 students were given assistance in moving into their new homes.

#### **Dormitories for International Students**

The university has dormitories for international students located in Kashiihama, Ijiri, and Ito. These dormitories have a combined total of 480 rooms, with single rooms, rooms for couples, and family rooms. International students occupy these dormitories for six months after arriving in Japan, until they are used to life in Japan.

The dormitories, which are affordable and safe, allow students to obtain information necessary for their lives in Japan through orientations, hold events to familiarize students with Japanese people and Japanese culture, and ensure that there is someone available to talk to, such as staff and students. The dormitories are essential for international students who are studying or conducting research in Japan for the first time.



Ito Dormitory 1.2, where both Japanese and international students live

#### Scholarships

Among the approximately 2,000 international students at Kyushu University, around 400 receive scholarships from the Japanese government and around 40 from overseas governments. In addition, around 350 students receive scholarships from Kyushu University, as well as from private foundations and prefectural and municipal bodies. While over half of international students at Kyushu University are privately funded, the time that they can spend doing part time work is limited and securing scholarships is an issue that needs improvement if the university is to admit excellent international students in the future. From Kyushu University to the World… And from the World to Kyushu University

## Unique Overseas Study Programs

Exchange Agreements with 140 Universities and Institutions Worldwide

#### Asia in Today's World(ATW)

ATW is a summer program launched in 2001, which has been offering undergraduate level courses about the past, present, and future of Asia and Japan. Each year, ATW hosts around 50 students from Asia, North America, and Europe. The total number of participants in the last ten years reached around 400 from 71 universities and 15 countries.

ATW provides all the participants with a unique study opportunity by combining Asian Studies courses and a Japanese Language Course, from which students can select three courses according to their major and interests. Asian Studies courses are also available for Kyushu University students to take for credit. In addition, peer tutor and homestay programs are offered for all participants. Through those programs,

which facilitate exchanges with Japanese people, participants can deepen their understanding of Japan and its culture.



ATW2011

#### ASEAN in Today's World(AsTW)

AsTW is a two-week program held in February and/ or March at a local university in the ASEAN region. Kyushu University and partner ASEAN universities jointly operated the program since 2009. From 2009 to 2011, AsTW was held in Mahidol University International College in Thailand and hosted around 50 students each year. Participants gathered not only from ASEAN member countries and Japan, but also from China, South Korea, and Europe. Participants can select one language and culture course from several options –Japanese, Chinese, Thai, Bahasa Indonesia, and other ASEAN languages as well as one ASEAN studies course. In the last



AsTW2011

three sessions, courses on current affairs of ASEAN; environment and food safety in Asia; public health in Asia; and cross-cultural understanding were offered for the ASEAN Studies courses.

This program is officially recognized by the ASEAN Secretariat. In the opening ceremony of the first year session in 2009, ASEAN Secretary General Surin Pitsuwan delivered a key note speech to students and presidents and vice presidents invited from major universities of ASEAN regions.

The 2012 program will be hosted by Ateneo de Manila University in the Philippines.

#### Japan in Today's World(JTW)

JTW is a short-term study abroad program held in English over a period of 10 months, with approximately 45 international students participating from North America, Europe, and Asia.

The participants are mainly undergraduate students from well-known universities overseas with which Kyushu University has exchange agreements. The participants, while studying Japanese, take a range of courses in English relating to Japan (Kyushu University students can also take these courses). JTW has put in place a range of other opportunities for international students to learn more about Japan, such as independent research/laboratory research in which students compose an essay or undertake research under the supervision of a member of teaching staff, as well as field trips where students can experience rice harvesting, Zen meditation, etc.

Also of note is a range of other initiatives that allow international students to mix with Kyushu University students and local people, such as tutorship and conversation partner schemes with Kyushu University students, and day visits to Japanese homes.



## Kyushu University TOPICS

TOPICS

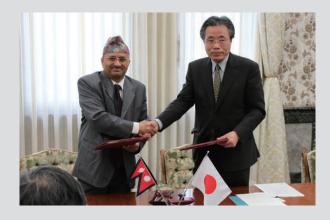
# Signing a Memorandum of Understanding with the Ministry of Science and Technology of Nepal

On Tuesday, February 9th 2010, Kyushu University and the Ministry of Science and Technology, Nepal agreed to a reciprocal exchange of science and technology and ongoing cooperation in biotechnological research. To this end, a memorandum was signed regarding the "Science and Technology Exchange between Kyushu University and the Ministry of Science and Technology, Nepal."

At the signing ceremony, the memorandum was signed by Setsuo Arikawa, President of Kyushu University, and Dr. Ram Hari Aryal, Secretary of the Ministry of Science and Technology, Nepal, both of whom expressed great hopes regarding the science and technology exchange.

This is the first time that the government of Nepal has systematically cooperated with a foreign university for promoting research. It is hoped that the signing of this memorandum will promote science and technology in Nepal and will drive research forward into new fields, for example, by creating new biotechnological research fields for Kyushu University, who have in the past, made use of genetic resources such as Nepalese fermented foods.

Furthermore, this is the first time that a Japanese university has signed a memorandum with a foreign government in accordance with the spirit of the Convention on Biological Diversity, and this will become a model case for promoting research that involves universities making use of foreign genetic resources.



TOPICS 2

## An Honorary Doctorate for Robert Huang

On Wednesday, March 24th 2010, a Kyushu University honorary doctorate\*was awarded to Mr. Robert Huang, chairman of the board of directors at the Synnex Corporation of the United States and an alumnus of our university.

Mr. Huang strongly believes that it is important for young people to have a sense of entrepreneurship, and in 2005, he donated a large sum of money to our university with the principal aim of fostering a greater sense of entrepreneurship and a more international sensibility among our students. As a result of this donation, in 2005, we started

running an entrepreneurship fostering program known as the "Kyushu University Robert Huang Entrepreneurship Program" (QREP), which has at its core a week of lessons conducted



in Silicon Valley. This program has so far proved very popular with students.

It was for providing remarkable contributions such as these to the enrichment, invigoration, and development of education at our university that we decided to award Mr. Huang with an honorary doctorate.

In his address at the award ceremony, Mr. Huang said, "By accepting this degree, I hope that I can continue to assist Kyushu University, my beloved alma mater, by supporting the development of students with a sense of entrepreneurship."

Furthermore, on December 1st 2010, we took the opportunity afforded to us by Mr. Huang's 100-year anniversary donation to set up QREC, which will provide progressive, systematic entrepreneurship education, and will also establish structures of cooperation for research and education with universities both inside and outside Japan, focusing on foreign universities that have an established reputation in the field of entrepreneurship.

## TOPICS 3 Hosting of "Islam Week"

Between Monday, April 19th and Saturday, April 24th 2010, the Kyushu University Muslim Student Society, an association of Muslim foreign students, who are studying at Kyushu university, held an event called "Islam Week" to provide an introduction to Islamic Culture.

At the event, a panel spoke to attendees about the Islamic faith and about the mosque that was built near our Hakozaki campus in 2009. There were also exhibitions of Islamic food and clothes.

There was also an area where Islamic women's clothes could be tried on, an area where attendees

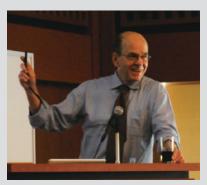
could try their hand at Arabic calligraphy, and much more, all of which meant that attendees could enjoy experiencing various aspects of Islamic culture that they would not ordinarily come across.

Lectures and discussions on Islam took place in the morning of Saturday the 24th. These were followed by a "Food Festival," where our foreign students treated attendees to traditional cuisine from their countries.

We were blessed with excellent weather and many people ate outside, meaning that this year's "Islamic Week" ended on a really enjoyable note.



## A Visit from Professor K. Barry Sharpless, Nobel Laureate



On Friday, May 21st 2010, a special lecture was held by Professor K. Barry Sharpless, winner of the 2001 Nobel Prize for Chemistry, entitled

"A Message for the Next Generation of Young Researchers."

In front of a lecture hall filled with around 400 attendees, Professor Sharpless delivered a lecture filled with interesting anecdotes that dealt with the latest developments in science and his own personal research. After the lecture, Professor Sharpless took part in a lively exchange with young researchers and post-graduate students, and the event ended in success.

Earlier that day, the Kyushu University's Distinguished

University Professor award ceremony had taken place at the Hakozaki campus. In recognition of his great contribution to the development of education and research activities at our university, and in acknowledgment of his remarkable achievements, Professor Sharpless was awarded the highest honor offered by our university, and became a Kyushu University Distinguished University Professor.

#### Kyushu University Distinguished University Professors

This title is awarded to people who have won a Nobel Prize or equivalent, and whose work could potentially contribute to education and research at our university.



## Kyushu University TOPICS

## TOPICS 5

## A Soccer Tournament for International Students on Ito Campus

On Saturday, June 5th 2010, one week before the start of the FIFA World Cup 2010, a soccer tournament organized by the Kyushu University Foreign Students Association (KUFSA) was held on Ito campus.

On a glorious sunny day, 10 teams lined up on the soccer pitch—national teams such as Malaysia, South Korea, China, and Japan, a team from the design and engineering department, and teams representing campuses and International Students House. Many different languages could be heard, and students dressed in red and blue uniforms clashed repeatedly as a series of feisty matches unfurled. After battling through the preliminary tournament and the knock-out league, the team that emerged victorious as the sun went down at the end of the day was a multinational team from International Students House.

KUFSA is an organization that represents all international students enrolled at Kyushu University. Its activities aim to increase cooperation and deepen friendships not only among international students, but also between international students and Japanese students.



## Establishing of a Chair Sponsored by Air Liquide

As part of our attempts to strengthen our position as an international education and research center for the creation of a hydrogen energy society, the Air Liquide Industrial Chair on Hydrogen Structural Materials and Fracture has been established in the Post-graduate Faculty of the Department of Mechanical Engineering. The chair is sponsored by France's Air Liquide and Air Liquide Japan Ltd. The presentation ceremony for the new chair took place on Monday, October 25th 2010.

At the presentation ceremony, Air Liquide's Deputy Vice President of R&D, Phillipe Queille, presented Kyushu University President Setsuo Arikawa with the application for sponsorship and said, "By taking this opportunity to sponsor a chair at Kyushu University, an institution that promotes world-class research into hydrogen energy, we hope to increase the level of cooperation between Air Liquide and Kyushu University and to promote research that aims for the realization of a hydrogen society."

France's Air Liquide is the global market leader when it comes to manufacturing and sales of industrial

and medical gas. Their sponsorship of this chair means it is the first time a French company has made a contribution to our university, and it is the first sponsored chair in the Faculty of the Department of Mechanical Engineering.

This is also the first time that Air Liquide has sponsored a chair at a Japanese research facility. In the future, we hope to cooperate with Air Liquide and Air Liquide Japan Ltd. by pushing this chair forward academically and by training researchers, while also maximizing our contribution to industry.



## TOPICS 7

## Honorary title of "Distinguished University Professor" discerned to Professor Muhammad Yunus

On July 17th, 2010, Muhammad Yunus, Peace Nobel Prize Laureate 2006 and founder of the Grameen Bank in Bangladesh, received the title of "Distinguished University Professor" from Dr. Setsuo Arikawa, President of Kyushu University.

Worldwide recognized, Prof. Yunus and the Grameen Bank received the Peace Nobel Prize as recognition of their activities to eradicate poverty through Social Business. On March 2010, the Grameen Creative Lab @ Kyushu University was launched with the objective to proactively carry out education, research, incubation and concept-spread of social business as the central core, in collaboration with the Grameen family, including GCL Headquarters, Japanese companies, NPOs/NGOs, universities, governments and citizens. On December 2010, the Grameen Technology Lab (GTL), business-academia consortium established at Hakozaki Campus, was also launched with the mission to promote social business domestically and internationally by utilizing Japanese advanced technology.

In recognition of his significant contribution to the development of research and education at Kyushu University, it was decided to award Prof. Yunus with the title of "Distinguished University Professor".

During the ceremony, Dr. Setsuo Arikawa, President of Kyushu University declared that "By further strengthening our cooperation with Prof. Yunus, we hope to contribute to the poverty eradication and relieve the weakest members of society". Receiving the title, Prof. Yunus answered, "This is an honor for me to accept this title of Distinguished University Professor, Kyushu University occupies an important place in my heart. I also feel a great sense of responsibility and would like to bring our relationship to a higher level."

During his 10 days Japan Tour in July, 2010, Prof. Yunus attended several symposiums and meetings all over the country, all coordinated by the Grameen Creative Lab@Kyushu University. At the occasion of the Public Symposium held in Fukuoka City on July 16th, Prof. Yunus signed a joint declaration "Social Business Hub in Asia" with Kyushu Railway Company, Fukuoka City and Kyushu University.

In line of this joint declaration, Kyushu University will continue to lead Social Business in Japan and Asia.





## Kyushu University TOPICS

## TOPICS 8

# Opening the Center for Japan–Egypt Cooperation in Science and Technology

The Center for Japan–Egypt Cooperation in Science and Technology opening ceremony was held on Wednesday, September 15th 2010.

The Center for Japan–Egypt Cooperation in Science and Technology was established on August 1st 2010 to provide leadership as a representative of Japanese Supporting University Consortium for the Egypt-Japan University of Science and Technology (E-JUST) and a main counterpart university for the Department of Electronics and Communications Engineering, E-JUST. The center promotes proactive, responsible support for E-JUST.

The ceremony was opened by Setsuo Arikawa, President of Kyushu University, who stated, "This center was established on the basis of the strong feeling of duty that our university feels to provide all our support for the E-JUST project." Congratulatory addresses followed from Fumio Isoda, Director of the



Dr. Walid Mahmoud Abdelnasser

Higher Education Bureau at MEXT and from Dr. Walid Mahmoud Abdelnasser, the Egyptian ambassador to Japan. Professor Mohamed El-Sayed Ragab from E-JUST, who came over from Egypt to attend the ceremony, gave a speech entitled "A Dream Becomes True."



Professor Mohamed El-Sayad Ragab from E-JUST

After the opening ceremony was over, a friendly gathering took place and an establishment memorial symposium was held, with lectures given by the Japan International Cooperation Agency (JICA) experts and E-JUST professors in the fields of electronics and communications.

E-JUST lecturers in electronics and communications have already been visited by Associate Professor Victor Goulart from our university, who gave lectures and provided students with research guidance from February–June 2010. Furthermore, Associate Professor Jia Hongting is planning to visited from September 2010-January 2011 to give lectures and guidance on student research.



## TOPICS 9 The Second Japan–UK Higher Education Symposium

Following on from the first symposium that was held in London in February 2009, the second Japan–UK higher education symposium was held over two days from November 18th–19th 2010 in Kyushu University, giving university presidents, vice presidents, and interested parties from academic institutions in both Japan and the UK the chance to meet under one roof.

Discussions were held between delegates from UK and Japanese universities, who held a real interest in strengthening strategic cooperation in a sustainable way, sharing their visions regarding common goals



and concerns. The symposium's goal was to consider how to deal with international issues effectively.

The first day, which started with Kyushu University President Setsuo Arikawa's opening address, saw Professor Motoyuki Ono, President of the Japan Society for the Promotion of Science, Jason James, Director Japan of the British Council, and Shigeharu Kato, Deputy-Director General of the Higher Education Bureau at MEXT, all offer their welcome to attendees. These opening remarks were followed by keynote speeches from Dr. Tsutomu Kimura, MEXT advisor, and Professor Don Nutbeam, Vice-Chancellor of the University of Southampton. In the afternoon, the attendees were divided into subcommittees for parallel sessions. Through discussions that lasted two days, and with internationalization in the higher education field as their theme, heated debates were held about higher education issues common to the two countries, and cooperation between Japan and the UK was further deepened as a result.

## TOPICS 10

# Signing an Academic Exchange Agreement with the Cambodian Government

Our university and the Cambodian government (Ministry of Agriculture, Forestry, and Fisheries (MAFF), the Forestry Administration (FA), and the Rubber Agency) have agreed to proceed with academic exchanges and collaborative research. The signing ceremony for this academic exchange agreement took place in the special departmental reception rooms on Thursday, November 11th 2010.

Cambodia is a region where large areas of valuable low and tropical seasonal forest still remain. As discussed at the 10th Conference of Parties of United Nations Conventions on Biodiversity (COP10) in Nagoya, conserving and making efficient use of tropical forests is an issue that affects all humanity, and must therefore be tackled by every country.

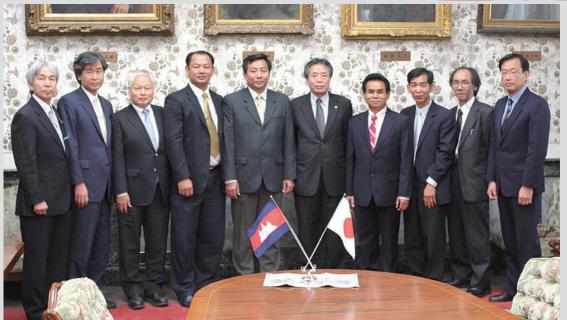
Some of our faculties, mainly the Faculties of Agriculture and Sciences, have already participated in academic exchanges with MAFF, the Cambodian FA, and the Rubber Agency, have accepted foreign students and have taken part in collaborative research. Furthermore, Cambodia was the core overseas research and education site for the Global COE Program "Conservation Biology that Opens the Way to Asia Coexisting with Nature," which was selected in 2009 and led by Prof. Tetsukazu Yahara from the Faculty of Sciences.

At the signing ceremony, Chheng Kimsum from the MAFF and the FA, said, "The fact that Japan has many forests remaining has left a deep impression on me. I'd like to build a connection between this exchange with Kyushu University and the management of forests in my country." Setsuo Arikawa, President of Kyushu University, went on to say, "Through this agreement, it will be possible to conduct cutting-edge collaborative research that aims to create a society where we coexist with nature and make the best use of Cambodia's biological resources for mutual gain, while also conserving these rich resources."

Before the signing ceremony, an international symposium entitled "The Current State of Cambodia's Forests and Rubber Forests, and the Issues Facing Them" had taken place in the International Hall, and a lively exchange of questions and opinions had taken place between the lecturers and the audience, which included

post-graduate students.







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Kyushu University is affectionately called "kyudai." Kyu stands for Kyushu, the Japanese island located southwest of the main island Honshu and the home of Kyushu University. Dai stands for Daigaku, the Japanese word for University.