

BLEND OF CULTURES SEEN IN KAGOSHIMA'S ARCHAEOLOGICAL SITES

異文化が交錯する鹿児島島の遺跡

Nakamura Naoko, Associate Professor, Research Centre for Archaeology



EXPLORING
KAGOSHIMA

Going into the Yayoi Period (300BC – 250AD), southern Kyūshū becomes a fully-fledged agricultural society based on rice cultivation. On the other hand, the Nansei Islands directly to the south were still hunter-gatherer based societies. Thus the present-day Kagoshima Prefecture area covered two different cultures in ancient times.

From an archaeological viewpoint, the dwellings, burial styles and utensils of both areas showed the differences in the cultures, but there was frequent interaction between the two.

For example, at the Takahashi shell mound in Minamisatsuma, large shells that can only be found south of the Amami Islands have been unearthed. These shells were used as bracelets by chieftains in northern Kyūshū in the Yayoi Period. It is thought that they were brought ashore at Takahashi on their way north and any damaged shells were thrown on the shell mound. Also in the mound, earthenware from both northern Kyūshū and Okinawa has been found, and in the Amami Islands and Okinawa, earthenware of the same period from southern Kyūshū has also been found, so it is highly likely that the people in the south of Kyūshū were also actively engaged in trade.

At Hirota on the island of Tanegashima, graves from the end of the Yayoi Period up to the 7th century AD have been found in the sand dunes. The human remains have shell accessories on them, such as cone shells, which were from islands further south. On the



The Takahashi shell mound in front of Tamate Shrine in Minamisatsuma



The excavation of a grave at Hirota on the island of Tanegashima

other hand, the earthenware found in the graves was from southern Kyūshū. From this we can assume that the Hirota area was once also a trading point on the route between the Amami and Okinawa islands and the eastern coast of Kyūshū.

Many of Kagoshima's archaeological sites are close to the sea, as with the Hirota and Takahashi sites, if we look closely at them, we can see evidence of dynamic activity between the areas through marine trade with the complementary use of the different resources each area had.

*Front Cover



Students around the ginkgo trees in front of the Faculty of Law, Economics and Humanities on Kōrimoto Campus

学部紹介特集

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KUToday is a biannual publication to present information about Kagoshima University to a wider international audience. Each edition will feature one faculty for prospective overseas students as well as other topics such as educational programmes, research and alumni information. Some articles are translations from the Japanese-language publication, *Kadai Journal*, upon which *KUToday* is loosely based. Any comments or suggestions about *KUToday* will be warmly received.

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A Note on Names
Following convention East Asian names appearing in *KU Today* are written family name followed by given name.

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The Faculty of Law, Economics and Humanities was established in April 1965. Comprising three departments (Law and Policy, Economics and Humanities), this multi-discipline faculty aims at producing graduates who are capable of dealing with the problems that face today's society based on an in-depth knowledge of social and cultural issues.

The Department of Law and Policy has developed a modern education system to foster versatile legal thinking and planning skills. The Department of Economics with its low student-to-teacher ratio and emphasis on information literacy uses three curriculum models to promote problem-solving among its students. Finally, the Department of Humanities offers a varied range of courses that give instruction in mental healthcare and the interaction of people and society; multicultural societies and media culture; regional studies and cultural development; and international

exchange amongst others. The faculty also offers inter-departmental courses in career education and media studies.

The Graduate School of Humanities and Social Sciences offers four masters' courses in Law, Economics and Social Systems, Humanistic-Environmental Cultural Sciences and International Cultural Studies and a doctoral degree course in Social Sciences.

The school promotes its various research areas and has developed high quality postgraduate programmes centred mainly on community-based subjects to enhance students' practical expertise in their specialised fields. Meeting the challenges of providing higher education accessible to mature students from the local community, classes are offered both in the evening to enable those with full-time jobs to enrol and off-campus in the access centres on the islands of Amami- Ōshima and Tokunoshima.

UNDERGRADUATE

- Law and Policy
- Economics
- Humanities

GRADUATE SCHOOL

- MA Courses
 - Law
 - Economics and Social Systems
 - Humanistic-Environmental Cultural Sciences
 - International Cultural Sciences
- PhD Course
 - Social Sciences



LAW AND POLICY

Through our high quality legal education answering society's needs for legal and public administration professionals, the Department of Law and Policy aims to produce graduates with both legal and policymaking abilities that can be applied to amongst others local government, and financial and insurance companies. To achieve this, our curriculum hopes to foster the following capabilities in our students: the acquisition and processing of legal information, legal planning and legislation, fundamental legal thought and practical legal negotiation.

In our department, students have the opportunity to learn about law, politics and administration from our diverse teaching staff. In their first year, we provide them the foundation for further study through lectures on the constitution, civil law and criminal law. From their second year onwards, they can take classes over a broader spectrum in law and politics such as administrative law, commercial law, civil procedure law, criminal procedure law, international relations, and ethnic and regional disputes. These classes are not solely for the purpose of teaching knowledge to the students, but rather they are providing awareness to be able to tackle the issues that society today is facing. We also offer classes in legal information, and those to increase students' communication skills so that they can play an active role globally.

Besides lectures, students start tutorials from the second semester of their second year. Class numbers are small which allows students to study the academic areas they are interested in more deeply. The tutorials on offer are constitutional law, administrative law, local policy administration, tax law, civil law (property and contract law, family law), commercial law, criminal law, international law, private international law and international relations. Students can also take more



Moot court

practical lectures from prefectural government employees and judicial scriveners who have considerable experience in their respective fields. We also organise internships with Kagoshima Prefectural Government, Kagoshima Municipal Council, law firms and private-sector businesses.

Students who graduate from our department go on to work in a variety of different fields. Many become civil servants helping to improve administrative services. Other graduates are contributing to Japan's industrial development in fields such as finance, insurance and real estate using the skills they have acquired to interpret global trends as well as understand local conditions. A small number of students also continue on to law school aiming to become legal professionals.

To further the international outlook of the department's students, a programme was started in 2014 to give them the opportunity to study at an overseas university. In 2014, they went to the University of Victoria in Canada. For overseas students studying in the department, we have a student tutor system to provide support in both their studies and day-to-day lives. The tutors are provided for two and a half years for full-time faculty students and one year for exchange programme students.



Overseas students talking with their student tutors

ECONOMICS

The educational goal of the Department of Economics is to foster human resources that can take a lead in our information-intensive society, that contribute to the regional economy, and that can take an active role in our globalised society. To this end we have faculty providing specialised instruction in a broad range of areas covering economics, management and sociology.

Yamamoto Kazuya

Professor, International Trade and Investment

In my tutorials we study about foreign exchange dealings, exchange rates, the globalisation of trade and businesses, economic development in other Asian countries as well as the world economy. Students from Korea or China are regular participants in the tutorials and through discussions and group trips, everyone has the opportunity to learn about other countries.



Wang Jingkai

Associate Professor, Corporate Finance

Through learning about corporate finance, business analysis is the objective of my tutorials. I want my students to try to understand the essence of business by studying extensively about business administration, corporate finance and decision-making. In order to do that, every member of the class is expected to play an active part in discussions. Class numbers are small, so I can tailor assignments to the needs of the individual. And I am certain that in completing their assignments they will feel that they have grown.

Kuwabara Tsukasa

Professor, Information Society

My field is symbolic interactionism which is social theory originating in the United States. I currently teach three lectures: in Information Society Theory and The World of Sociology, I teach the basics of symbolic interactionism, and in The Sociology of the Group, I explain about its application. My tutorials have two main themes, namely communication theory and human relations, which students gain a foundational knowledge about by reading academic literature on sociology and psychology. This helps prepare them for their dissertations in their final year. The motto of my tutorials is to learn and explain yourself systematically.



In the Department of Economics, we have a student council, made up of students from each tutorial, which organises welcome orientations and volleyball matches to let students get to know one another better and hopefully invigorate their studies.

HUMANITIES

The Department of Humanities is divided into five courses: Psychology, Media and Contemporary Culture, Comparative Regional Environments, Japanese and Asian Culture, and European and American Culture

Udo Satoshi Associate Professor

Teaching French language and francophone cultures, I might be regarded, by students and colleagues, as a specialist of French literature as most of French teachers are so in Japan. In fact, I have never studied in a Department of French Literature but spent over ten years in the Department of 'Area Studies' in the University of Tokyo. The reason I chose such a 'strange field'—so it seemed to me—is that I then began to take an interest in Arabo-Francophone cultures in North Africa (which have long been ignored by Japanese Francophiles), and that I thought only the Department of Area Studies could allow me to pursue my peculiar research.

Unfortunately, in the Japanese Association of Middle Eastern Studies, literary studies are quite marginalised. We—such 'minor' researchers of Arab, Iranian, and Turkish literatures—have then formed a circle of Middle Eastern literary studies, organising workshops and conferences in Tōkyō and Kyōto. I also founded l'Association japonaise des études de la littérature maghrébine with several colleagues who had conducted research in the frame of 'French literature', so that francophone researchers may team up with arabists. The most neglected field must be performing arts. For lack of specialists, I had an opportunity to work for Festival Tokyo introducing the Lebanese dramaturge Rabih Mroué, and I have been cooperating on some Arab theatre events ever since. In 2014, I received an Iranian playwright in Kagoshima and organised a workshop with the students' theatre club, which was relayed by Skype to Teheran University.

Now, I am trying to reconstruct my 'area studies' by attempting a new area, Taiwan. It might be surprising if I say Taiwan is comparable to Algeria, but both of them actually have similar colonial experiences and linguistic complexity. In fact, a Japanese professor, Shimada Kinji, who taught at Taipei Imperial University (1929-44), created a new colonial literature of wansei (Japanese settlers born in Taiwan), making reference to French colonial authors (Robert Randau from Algeria). Their colonial/migrant pasts also produced superposed multilingual situations: French, Arabic (literary and dialectal), and Berber languages (several dialects) are employed in Algeria, while Mandarin has been officially used by Taiwanese natives who usually speak Taiwanese (derived from Fujian dialect of the Continent), Hakka, and Aboriginal languages. Berber



European and American Culture course students talking with Associate Professor Udo

languages were suppressed for a long time, so were Taiwanese local languages. Since the end of the 1980s, however, the authoritarianism has weakened in both regimes: after a decade of bloody civil war, Berber languages were finally recognised as national languages by the Algerian constitution, and Taiwanese and Hakka languages began to be taught in primary schools as 'mother tongue'. Now I am interested in recent Taiwanese language movements and Berber cultural activities; they are both based on native spoken languages, encouraging the conservation and innovation in their vernacular cultures.

When I talked on the spoken languages and oral cultures of Taiwan and Arabo-Berber world at our campus open day, a high school student came to me saying: "I've got very interested because I'm also curious about Kagoshima's dialects". Exactly! Living at the southern edge of Japan, we are already (but only slightly) aware of the originality of our own local culture. Knowing our locality could lead us to recognise other localities, the latter could invite us to rediscover the former. We have numerous disciplines to approach our surroundings, and our faculty offers several methodologies to analyse human societies. I hope our students will discover the 'area' we live in from different viewpoints, making a comparison with other areas. Globalisation does not necessarily mean homogenisation of the world, but could also mean connecting one locality to another without losing their singularities beyond resemblance. Studying Algeria in Kagoshima would therefore bring us a new practice of 'area studies' which could contribute to our local culture.



Media and Contemporary Culture course students talking with students in San Jose, USA



Comparative Regional Environments course students on an archaeological dig



Psychology course students carrying out experiments



Japanese and Asian Culture course students on a field trip to Senganen in Kagoshima City

student voice

Daniel Echter (Germany) Exchange student



Guten Tag! I am Daniel from Germany. I am a third-year Japanese studies undergraduate student and currently on my one-year exchange at Kagoshima University. My reason for coming to Kagoshima University was to improve my Japanese

skills and gather knowledge that could be useful for my undergraduate dissertation.

When I first arrived in Kagoshima I was astonished by the sight of Sakurajima and the lush greenery of the prefecture in general. As someone who spent most of his time in Japan in Tokyo and its suburbs this was a really welcome change in landscape. On top of that, there are not many people who can claim to have lived in a city in the immediate proximity of an active volcano. The pace of everyday life is slower in

Kagoshima, which is something I got used to liking very quickly. I hardly miss the big cities anymore, but I am enchanted by the possibilities Kagoshima offers you instead. How about a hike in the mountains, a day at the beach, or just some cycling in the countryside? Everything is possible and very close.

At first I was confused and didn't know my way around, but thanks to my teachers in the Department of Humanities and the other exchange students, who welcomed me with open arms and showed me around, I soon became used to university and daily life. My course of studies includes, of course, a fully-fledged Japanese language programme offered throughout the week. The teachers in Humanities are very nice and you really get the feeling they are making an effort for you to comprehend the things they are teaching you.

If I look back now, I can definitely say my Japanese skills have improved over the year and I hope they will continue to do so even after I have left this beautiful city with its nice people.



LAW

The educational aim of the postgraduate Law department is to produce professionals who can tackle legal and policy issues by providing specialised knowledge in legal studies, political studies and policy studies.

The department has a mixture of normal students, overseas students and mature students and offers two courses: Professional Development, which aims to give students a high level of professional knowledge as well as develop their judgement capacity; and Practical Education which aims to foster students' capability to carry out practical research based on social experiences. For mature students, we offer evening instruction as well as degree course extensions.

We actively accept overseas students, and wish that our students will come away with not only professional knowledge but also an international outlook. In order

for overseas students to get the most out of their time with us, we arrange for them to have a student tutor for their first year to support both their studies and life in Kagoshima. Some overseas students also decide to stay on and do research for their PhD with us after graduation.

Graduates from the department go on to work in local government, or judicial scriveners and tax accountant offices, as well as private-sector businesses in the media, publishing and information and telecommunications.



ECONOMIC AND SOCIAL SYSTEMS

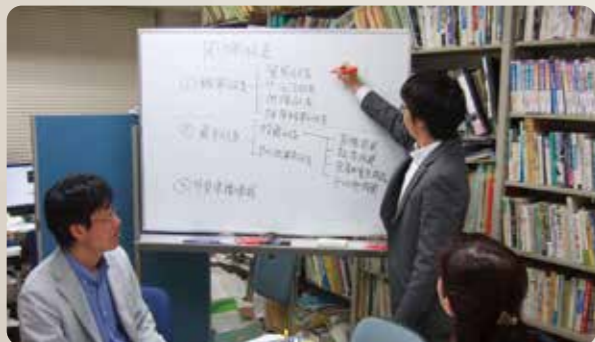
In this department, our educational programme covering economics, business management and sociology, aims to produce graduates who can be dynamic and self-reliant in regional development in a practical way as well as graduates who want to advance their careers in professional areas such as tax accountancy.

Economics and Social Studies

Enables students to analyse both theoretically and empirically the mechanisms behind changes in the economy and society. Classes cover economic theory, economic history, statistics, finance and sociology.

Regional Management

Provides students the capability to analyse both the current situation of regional businesses and society, and the policy making they are based upon. Classes include economic policy, international economics, management, accountancy and information systems.



Shao Lijun (China) MA student



I am a member of the international trade and investment tutorial and am currently studying regional economic development and industrial accumulation. What I like about this department is firstly that all of the teaching staff are very kind and teach us very thoroughly, especially the overseas

students. I also like that class numbers are very small so that the teachers are able to gear the content more towards the foreign students. Finally, I am very happy with the study environment. Every postgraduate student is given a personal workspace with access to PCs and printers.

HUMANISTIC-ENVIRONMENTAL CULTURAL SCIENCES

Ozaki Takahiro Professor

My research background is in cultural anthropology and my main research topic at present is social change in nomadic societies in Mongolia. However, I am interested in many different areas including modern social change in East Asia, the historical relationship between people and livestock, and qualitative social research. In the postgraduate courses that I teach, the students cover these areas as well as conducting their own qualitative social research.



Currently I am academic advisor to two overseas postgraduate students. One is studying the migration of ethnic Koreans in China, while the other is comparing volunteer work in China and Japan. The students chose their study topics themselves, and I give them guidance in their study plans, surveys and data analysis. If you are interested in any of these areas, why not come and join us?



Song Da-Jeong (Korea) MA student

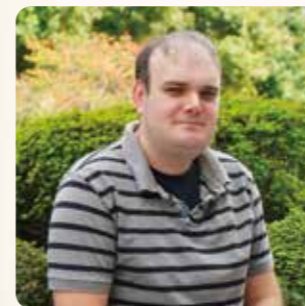


I am studying tourism and eco-tourism in the Amami Islands. Of all islands, the Amami Islands are the ones I like best. There are many different reasons why I am at Kagoshima University studying this. I had studied Japanese language and literature at university in Korea, but never imagined that I would end up doing an MA in cultural anthropology in Japan. In the beginning I was quite disappointed with the way my studies were going, but I was able to overcome these problems with help from my academic advisor and the other teachers in the department. From October of my second year I went to Amami-Oshima to do research for my final dissertation and also do an internship there. Every day is really busy, but I am enjoying every minute of my time in Kagoshima.

INTERNATIONAL CULTURAL SCIENCES



Matt Watson (Australia) MA student



I first experienced Japan and Kagoshima seven years ago when I came to Kagoshima University on an exchange programme. During that year, I had many great experiences, made friends from around the world and learnt many new things.

Then, after three years as an ALT in Nagano Prefecture, I decided I wanted to return to university both to improve my Japanese skills and learn specifically about the field of translation. With my good memories about the place, its people and level of education, there was no question in my mind that I wanted to return to Kagoshima University. Now in my second year majoring in translation studies, I have once again made a whole new set of great memories and friends and learnt new skills.

My studies into translation have shown me how much more in-depth and complicated it is than I initially thought. With differing approaches, cultural

influences, language nuances and target audience, there are many things you have to think about when translating. I am now focused on the idea of foreignisation vs. domestication, which involves how much a translator changes the text to conform to the target audience and culture. Domestication involves making the translation closely conform to the culture of the target language, which often involves a loss of information and meaning from the original; whereas, foreignisation retains the information and meaning from the source material, even though it involves deliberately breaking the conventions of the target language. A relative new idea, foreignisation and domestication, is often involved in English-Japanese translations, including Japanese pop culture where audience's demands influence the way the translations are done.

Outside of the classroom I have continued to have many great experiences in Kagoshima. Making new friends, travelling, sports and cooking are just a few of the things I have enjoyed in the last couple of years. I've always loved Kagoshima, minus the ash, with its laid-back lifestyle, beautiful scenery and kind people – it really feels like a second home now. Once my dissertation is finished, I hope to continue to live and work in Japan, maybe even Kagoshima.



SOCIAL SCIENCES

The Social Studies doctorate programme was established in 2003 and has three courses, Regional Policy, Cultural Policy and Island Policy.

The programme aims to provide a high level of professional knowledge necessary to combat regional problems, and develop leadership in our students to tackle these issues and find solutions to them. Our students will gain judgment skills from a perspective beyond their normal field of humanities or social sciences. To attain this, our programme centres on project-based education and research but also encompasses science fields to provide a broad and comprehensive educational and research experience. We are looking for applicants who have an interest in the problems facing regional society and want to acquire a high level of professional knowledge that can be applied to its revitalisation, and who are able to

discover the problems that today's regional society faces, and want to acquire the knowledge to tackle those problems and the organisational skills to run projects to achieve that goal.



Field research Interviews

Message from the Programme Head

Kuwahara Suelo, Professor



One of the central features of the programme is the project research that enables students to learn how to conduct joint research and have more in-depth discussion with students from other academic areas, creating interaction across all disciplines. Another is that we have a fantastic faculty covering social sciences, economics, humanities and natural sciences. We also have many overseas students on the programme – of those who enrolled in 2014,

one quarter were from abroad. Another significant feature is that about 40% of our PhD candidates get their doctorates – of these 32% are overseas students. Finally, what sets us apart from other doctorate programmes in Japan is the Island Policy course, the only one of its kind nationwide. Kagoshima Prefecture has the largest number of islands of any prefecture in Japan. These islands with active volcanoes, World Heritage sites, and their diverse nature and cultures form the perfect research field. This is the only programme in Japan where you can do island research seriously. We welcome any overseas student who would like to do research in the productive climate of southern Kyūshū.

student voice

Xiong Hualei (China) PhD student



There are two sides to the PhD programme for us, the overseas students. First it is where we do research. There are many professors who are not only experts in their field but also extremely approachable. There are systems which support our research. Using these we can further our knowledge about law, economics, society, history and culture.

The other side is that it allows us to experience Japanese culture while also having an international outlook. With the programme's emphasis on fieldwork, we have many opportunities to meet the local people. Also in the classes and reading rooms, we can meet many people with different interests, nationalities and personalities who can stimulate our research and help us when we need help. Overseas students tend to have many worries not only about their research but also about life in Japan in general, but I am sure that you will find this programme both rewarding and enjoyable.

Crockery used at the Faculty of Agriculture (and its pre-cursor) in the 1950's. Found on Kōrimoto Campus



あ鹿大見て
る紀

Research Centre for Archaeology

The centre was opened in June 1985 to survey and research the cultural assets that can be found on four of the universities' grounds: Kōrimoto Campus, Sakuragaoka Campus, the Toso student residences and Iriki Farm. The idea for the centre came into being in 1975 when one of the students found an earthenware fragment on the construction site of a building extension and handed it over to the university for safekeeping.

Kōrimoto Campus lies on a plain and much has been found including the remains of paddy fields from the Yayoi Period (300BC – 250AD) and the remains of dwellings and the earthenware the people who lived there used from the Kofun Period (250AD – 538AD). Both Sakuragaoka Campus and the Toso residences are on higher ground and the relics found there from the Palaeolithic Age and Jōmon Period (14,000BC – 300BC) are in particularly good condition due to having been covered in layers of volcanic ash. Relics from the Jōmon Period have also been excavated at

Iriki Farm, which also lies on high ground. Students have the opportunity to learn about the remains found at the university in their general education classes. They can also see the artefacts first hand at the university museum, which is open to the public, too. The role of the centre is to conduct trial excavations and supervised excavations when construction is undertaken anywhere at the university, and then catalogue and conserve artefacts as well as producing written reports. When the full background to the artefacts is known, the final stage is to organise events to show the findings to the public. When excavations take place anyone may come and view and if they are lucky, they may be able to take part in the work itself. Future plans for the centre include increasing awareness in archaeological finds outside the university as well as organising open classes and excursions to archaeological sites to further promote the importance of cultural assets.



Earthenware from the Kofun Period. Jar and pot in a style unique to southern Kyūshū. Found on Kōrimoto Campus



Wooden artefacts from the Yayoi Period. (From the top) A bowl, building material and agricultural tool. Found on Kōrimoto Campus



Viewing an archaeological site

Stone arrowheads from the Jōmon Period and stone blades from the Palaeolithic Age. Found on Sakuragaoka Campus





Uncovering the interaction between leguminous plants and root nodule bacteria

Most leguminous plants allow root nodule bacteria to live in their cells and establish mutualism. In exchange for providing the bacteria with an energy source, the host leguminous plants receive a nitrogen source from the bacteria in the nodules. The research of Professor Uchiumi in the Graduate School of Science and Engineering aims to elucidate the molecular mechanism of the interaction between the plants and the bacteria.

"I am very interested in endosymbiosis because two different organisms live together as one entity," is how Professor Uchiumi describes the appeal of his research. He has been studying the symbiosis between leguminous plants and root nodule bacteria (also known as rhizobia). The motivation for his research can be traced back to when he himself was a student at Kagoshima University studying under Professor Emeritus Higashi Shirō, who, for the first time in Japan, applied molecular biological methods to the research of legume-Rhizobium symbiosis.

Symbiosis between leguminous plants and rhizobia

More than 18,000 species of leguminous plants are known including very familiar ones such as soya beans, lentils and clover. Almost all of them have lumpy organs on their root systems called root nodules which house rhizobia.

Only when they live in the root nodule cells do rhizobia reduce atmospheric nitrogen gas to ammonia and supply it to their host plants as nitrogen nutrients. Nitrogenase, the enzyme of rhizobia, consumes a lot of energy to produce ammonia. However, host plants provide enough amount of energy source to rhizobia. This process is called symbiotic nitrogen fixation.

Nitrogen is essential for plants as one of the three key elements in fertilisation, the other two being phosphate and potassium. However, plants cannot directly use the nitrogen in the air, which is why we use nitrogen-fertilisers in our fields. A chemical reaction at high pressure and temperature is required to produce artificial nitrogen-fertiliser (industrial nitrogen fixation by the Haber-Bosch process) and consumes a large amount of fossil fuel. Professor Uchiumi says, "If we can find a way to cause nitrogen fixation without using fossil fuels that would be brilliant. By figuring out how leguminous plants and rhizobia interact, we could use

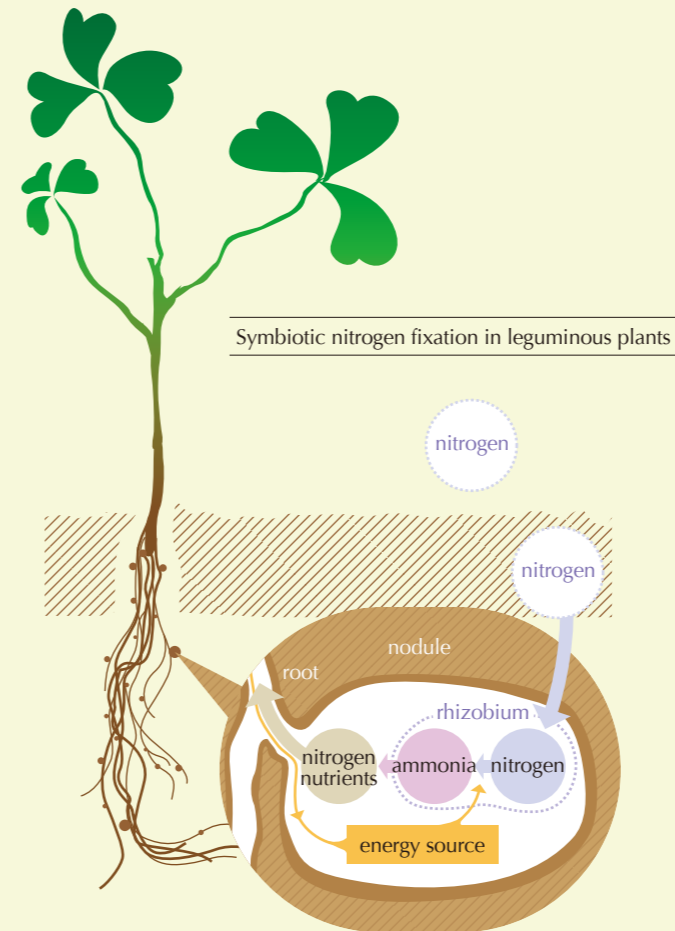
this to improve the nitrogen fixation in soya plants, which would not only lead to greater production, but would also possibly contribute to solving some of the environmental and energy problems we are facing."

Host plants govern the symbiosis

In his experiments, Professor Uchiumi mainly uses the bird's-foot-trefoil, *Lotus japonicus*, which is relatively small at 15cm – 35cm and one generation time is shorter than three months. It is also particularly suited for use in this kind of research, since its genome analysis has been completed and it can be genetically-modified easily. Research is carried out using advanced equipment such as next-generation DNA sequencers to decipher the nucleotide sequences as well as electronic and confocal laser scanning microscopes.

In 2011, Professor Uchiumi together with other researchers including Professor Suzuki Akihiro at Saga University became the first in the world to discover that leguminous plants sense light (colour) and regulate their root nodules accordingly. They found that when the plants do not have enough sunlight, nodule development is temporarily suppressed sending nutrients to the stem and leaves and promoting growth. This enables the plants to survive until when the plants grow enough to get sunlight and photosynthesis can more easily take place. The findings of this research were published in the Proceedings of the National Academy of Sciences (<http://www.pnas.org/content/108/40/16837.long>).

In another collaborative research project with Dr. Peter Mergaert of the Institut des Sciences du Végétal in France, they found that plant peptides in the nodules make the rhizobia differentiate into their symbiotic form called bacteroids. This exciting finding was published in Science (<http://www.science.org/content/327/5969>



/1122.long). Leguminous plants give rhizobia a home in their root nodules and an energy source to carry nitrogen fixation, whilst by using peptides to control the growth and gene expressions of rhizobia, the host plants force rhizobia to fix nitrogen. So, in fact, the relationship between the host plants and the rhizobia is not equal, but rather the rhizobia are under the control of their host plants. Professor Uchiumi is also interested in finding out how the plants govern the acceptance and rejection of the bacteria. "This kind of symbiotic relationship can be seen in other organisms, too. Expanding the species researched may lead to a discovery in the rudiments of life such as the self and non-self recognition system. Just thinking about it sparks my interest."



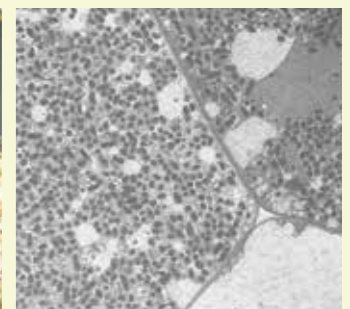
Uchiumi Toshiki, Professor

Graduate School of Science and Engineering

Born in Nagasaki Prefecture in 1958. Received his MSc in Biology from Kagoshima University in 1984. After working in a research laboratory at Idemitsu Kosan Co. Ltd., he joined the Department of Biology in the Faculty of Science at Kagoshima University in 1986. On a Japanese government programme in 2003-4, he did research at the Institut de Sciences du Végétal in France. He became professor in the Graduate School of Science and Engineering in 2010. He holds a PhD in Agriculture. His research areas are microbial genetics, and plant molecular biology and physiology.



Roots and nodules of a Chinese milk vetch



Rhizobia in root nodule cells observed by transmission electron microscopy



Shodō Society

Tsuruta Misaki, President, BA student,
Faculty of Law, Economics and Humanities

The *shodō* society has 40 members and we get together every Tuesday and Saturday. Our activities include regular calligraphy practice, critiques from our teachers, a summer training camp, as well as several exhibitions. We also have other fun events like welcome parties for new students, barbecues and a stand at the school festival.

Shodō is a part of Japan's artistic culture and is the art of expressing the beauty of written characters through brush and ink. It has various kinds of writing styles including *kaisho* (regular script), *gyōsho* (semi-cursive script), *sōsho* (cursive script), *reisho* (clerical script), *tensho* (seal script) and *kana*. Even within the same style, differences in classical characteristics can change the whole mood of a piece. The mood can also be influenced by the shape and beauty of the characters as well as by its composition and format. For example, by carefully using different shades of ink and both strong and weak brush strokes, you can create a very lively piece. Even if different people have written the same thing, their own individuality and artistic sense will always be there for you to appreciate.

In the society, we choose the styles of *shodō* we like and then, whilst paying attention to classical works, produce a piece of our own. Through regular practice and advice from teachers and senior club members, we are continually improving our skills. At our exhibitions we have the opportunity to receive feelings, opinions and appreciations from the wider public. We also create and send one of a kind end of year and summer greeting cards to each other. Through *shodō*, brush and

ink, we can express our individuality whilst strengthen the bonds between us.

Our society also welcomes foreign students who have an interest in Japanese calligraphy. They come and join in by writing their names or favourite words in Japanese characters, which we then mount on a scroll so they can take home with them along with the memories. Even if they have never done it before, we can show them though gestures and hand signals, it is always a fun experience. Last year as a part of Kagoshima's arts exchange programme, we had the chance to do *shodō* with students from Thailand as well. Like with the foreign students, they wrote their names or favourite words in Japanese characters, which we then laminated and presented to them. These interactions between our club and students from abroad are not only really enjoyable for both sides, but also promote the joy and beauty of *shodō*. If anyone out there has an interest in *shodō*, please to do not hesitate to come and join us and experience its charm for yourself.



Gangneung-Wonju National University, Korea

We are very grateful for the solid relationship we have had with Kagoshima University for the last 15 years. Long-term student exchanges started in 2001 and a short-term group exchange to learn about each other's language and culture followed in 2003.

Founded in 1976, GWNU is the main university located on the Republic of Korea's east coast and has played a crucial role in national strategic areas. As a result, we have been selected to participate in national projects such as best national university for the Innovation Support Project for two consecutive years from 2013, Leaders Industry-University Cooperation (LINC) Project in 2012 for five years, Innovation Centre of Engineering (ICEE) Project II in 2012 for 10 years, and the University of Creative Korea Project (CK-1) in 4 groups: Fostering Creative Talents for East Sea Marine Bio-Industry, Convergence New Industry Software, Responding to Global Environmental Changes, and Business Manpower in Pan East Sea Region. GWNU attracted the highest amount of project financial support from the government in Gangwon provincial region in 2014.

As a student-oriented core university, GWNU implemented its Student Life Challenge programme and systematically supports students from admission to graduation. We are the only university in Korea that fosters student engagement with a winter and summer sports programme using the local environment helping to produce creative talents to meet the needs of society.

As a global exchange hub-university linking the East Asian region, GWNU has formed academic agreements with top international schools, pursuing academic exchanges with diverse students, faculties and researchers and has developed into a leading international research institution in the global community. As a result, GWNU placed 2nd in Korea and 9th in Asia for citation per paper and ranked 6th in Korea, 36th in Asia among small and medium-sized universities without a medical faculty in the QS 2014.

GWNU offers various international programmes for outgoing and incoming students to broaden students' horizons. To internationalise the campus, we are participating in the Korean Government Scholarship Programme and also have our own GWNU Global Scholarship Programme for foreign students.



Nagashima Kana
Exchange student from Kagoshima University

Deep in the countryside, Gangneung-Wonju University is two and a half hours by bus from Seoul. Every day is very fulfilling. It is easy to get around, so I often spend my weekends travelling about. During the week, I am busy studying and taking part in extracurricular activities and being involved with university societies.

I am the only Japanese student here, so I think I have chosen the ideal place to spend my year abroad. In fact, I feel like I have become Korean. For class here, we have to make a lot of presentations and do a lot of homework, and it is much more difficult than what I was doing in Kagoshima. Without a doubt, this is the hardest I have studied in my four years at university.

As well as attending normal university classes, I also go to the university's language centre. The classes have about 15 people in them and are really fun. When we have discussions in Korean with my friends I have made from all over the world, there are often some really interesting comments. We often don't agree with each other but that it is one of the best parts of the centre. The people I have met in the language centre here, the classmates and Korean teachers that we go on trips and to events together with, have become much more than just classmates and teachers. I am looking forward to keeping in touch with them once I leave.

I'm sure studying in Seoul is nice, but I definitely recommend "turning Korean" in the beautiful surroundings of Gangneung





Tropical Fisheries International Linkage Programme



Matsuoka Tatsuō

Dean, Faculty of Fisheries,
Kagoshima University
Chairperson, Governing
Council of the Programme

The Postgraduate (Master) Programme on Tropical Fisheries with International Linkage (ILP) starts in April 2015. This is an international cooperation alliance to provide high quality education in fisheries sciences for students in the Southeast Asian region.

The programme was founded in 2014 and now run by five postgraduate schools: the Faculty of Fisheries and Marine Sciences, Universitas Sam Ratulangi (Indonesia), the Faculty of Fisheries, Kagoshima University (Japan), the School of Fisheries and Aquaculture Sciences, Universiti Malaysia Terengganu, the College of Fisheries and Ocean Sciences, University of the Philippines Visayas, and the Faculty of Fisheries, Kasetsart University (Thailand). This arrangement aims to meet the expectation that higher education institutions in fisheries should produce human resources who can contribute to the globalisation of society.

The member schools provide the programme with classes reflecting their characters and the programme shares them. Students can move freely, take subjects among the member schools and obtain credits. In particular, we encourage students to study subjects taught in different contexts, corroborate with friends from different cultures and expose themselves to different environments.

The registered students can obtain a certificate from the programme in addition to the degree, if they fulfil the given conditions. We readily promise students that the programme will provide valuable and enjoyable experiences.

Faculty of Fisheries, Kasetsart University

Suriyan Tunkijjanukij, Dr.Scient.

The Faculty of Fisheries was established as one of the first four faculties of Kasetsart University on 2 February 1943. We are ranked top three in terms of academic and research reputation in the area of fisheries and pioneered well-known fisheries degree programs both at the undergraduate and postgraduate levels in Thailand. Students who enrol in the International Linkage Programme can take subjects from our five departments in Aquaculture, Fishery Biology, Fishery Management, Marine Science and Fishery Products. We aim to produce professional scientists and researchers working in the field of fishery. Students who complete our programme acquire not only technical knowledge and skills but also English communication and cross-cultural skills to increase their opportunities to work worldwide and with a variety of cultures. Our faculty members are active in research covering a wide range of disciplines in fisheries including joint international projects and domestic cooperative programs with other research institutions. We also have five fisheries research stations located in different provinces acting as the research arms of the faculty to support the teaching, research and field training of students. The scientists at each research station conduct their research to provide informative and technical support for our staff in a vast array of fisheries. With our strong background in fisheries, we are confident that we are ready to serve all international students to achieve their study goals.



School of Fisheries and Aquaculture Sciences Universiti Malaysia Terengganu

Wan Mohd Rauhan Wan Hussin, Senior Lecturer

The School of Fisheries and Aquaculture Sciences has always been committed to providing students with excellent academic programmes and learning facilities. Through our academic staff with a wide array of expertise, we have been a productive centre for research in fisheries and aquaculture. We have established international networks with many universities in Asia. This International Linkage Programme is our latest commitment for a better quality in education and research. We have developed subjects based on our forte that match international needs. Our experienced academics are also committed in supervising students to carry out research here. English is the common language in Universiti Malaysia Terengganu and is used on many occasions. Therefore, we welcome international students to our school for quality education and research. Students are also welcomed to experience the vibrant lifestyle and unique culture of Terengganu and at the same time share their experience and culture with the local communities. We believe this programme will create a strong network between participating institutions and therefore be able to produce knowledgeable and dynamic graduates who can help to develop the fisheries sector and contribute to environmental sustainability.



Faculty of Fisheries and Marine Science Universitas Sam Ratulangi

Grevo S. Gerung, Dean

The Faculty of Fisheries and Marine Sciences was founded in 1965 in city of Manado, which is both famous for its skipjack tuna (*Katsuwonus pelamis*) and Bunaken National Park, making it an excellent place for researchers, especially in the field of marine biodiversity and marine natural products. Located on the north eastern tip of the island of Sulawesi with its vast marine biological resources, the challenge for the faculty is to continue to generate graduates through our undergraduate, master's and doctoral programmes who will manage these living resources for the benefit of mankind.

We are very excited to be joining the International Linkage Programme to share knowledge in the field of fisheries and marine science. With our high marine biodiversity and large marine area, we are looking forward to hosting members of the programme to jointly improve human resources through education and increase research collaboration to conduct exploration, exploitation and conservation of marine resources. Science is not owned by a particular university, but belongs to mankind. We wish everyone a warm welcome to our university.



Faculty of Fisheries Kagoshima University

Shiozaki Kazuhiro, Assistant Professor

The Faculty of Fisheries has been conducting projects in the Southeast Asian region for decades. We encourage foreign students to enjoy high-quality fisheries education in Japan through this International Linkage Program. Our faculty provides programme students with lectures and practical subjects on comprehensive current fisheries topics, cutting-edge analytical techniques and sea-going training on our training vessels, Kagoshima-Maru and Nansei-Maru. All classes are conducted in English and programme students can enjoy studying through interaction with peers from many countries. We have many professors who can supervise research for students from the member schools. In addition, visiting students have the chance to obtain valuable experiences relevant to the people and culture of Japan through studying with students of Kagoshima University, while those students are requested to look after our students when they visit the member schools. We believe that these collaboration activities enable all the programme students to attain an international spirit towards contribution to a globalising society and the development of marine products industry. We wish to contribute to the production of young human resources and the development of marine product industries in Southeast Asian countries through our international education system under the Linkage Programme.



College of Fisheries and Ocean Sciences University of Philippines Visayas

Crispino Saclauso, Dean

UP Visayas (UPV) is one of the autonomous units of the University of the Philippines, the national university of the Republic of Philippines. UPV's flagship college, the College of Fisheries and Ocean Sciences is at the forefront of fisheries education in the country and the region. Our degree programmes respond to the call for highly-trained manpower in the field of fisheries who will address the need for sustainable development of the country's aquatic resources.

We cordially invite you to come to UP Visayas. Study the tropical marine ecosystems and the many facets of exploiting and managing these varied and often complicated resources. Our facilities in aquaculture are world-class to enable you to learn more about fish rearing and culture. Learn the many techniques of processing fish, the Filipino way. In addition, the Philippines is one of the best places for students to study completely in English. And after a long week of being at school, you can relax on one of the many beautiful beaches in the country. Through the International Linkage Programme, we wish to share with foreign students our best experiences in the field of fisheries. Similarly, we shall send UPV students to other partner universities so that they too can enrich their learning. With these academic collaborations, we hope to contribute to the production of young human resources who are well equipped to address the many issues in fisheries in a globalising society. We look forward to seeing you in UPV.



Professor Baba receives top honour from Japanese Society for AIDS Research

Professor Baba Masanori from the Intractable Virus Pathology Control and Research Centre of the Graduate School of Medical and Dental Sciences has greatly contributed to the advancement of AIDS research through his work in the field of explicating the growth inhibition mechanisms of newly developed anti-HIV1 drugs.

His outstanding research achievement has had a worldwide impact. He published over 300 original research papers in English, and his work has been cited in over 13,500 articles in the past 20 years. He identified many new anti-HIV drugs, some of which have undergone clinical trials. He has also conducted excellent research on HIV-1's gene expression and DNA transcription control mechanisms. Furthermore, he served as Director of the Japan Society for AIDS Research for 8 years in 2



terms (April 1997 to March 2001 and April 2003 to March 2007), and was instrumental in the development of the Society. He has also served for many years as editor and member of editing committees of a number of international scientific journals.

In May 2013, he was granted the highest award of the International Anti-Virus Society (the Elion Award), becoming the first East Asian laureate of this award.

International Awards for Science and Engineering Faculty Members



Best Poster Award at The 17th International Symposium on Silicon Chemistry, Berlin 2014 to Miyachi Shunya, a post-graduate student in the department of Chemistry, Biotechnology, and Chemical Engineering, for his presentation titled "Preparation of phthalimido group-containing ladder-like polysilsesquioxane".

Best Paper Award at The Fourth IIEEJ International Workshop on Image Electronics and Visual Computing 2014 to Hanayama Tatsuya, a post-graduate student in the department of Information Science and Biomedical Engineering, for his paper "Easy projector and Monochrome Camera Calibration Method Using Plane Board with Multiple Encoded Markers"



Outstanding Poster Awards at the Taiwan Japan Bilateral Workshop 2014 to two post-graduate students, Ishi Takuro from the department of Chemistry, Biotechnology, and Chemical Engineering for his presentation "Preparation and Characterisation of Imidazolium-type ionic liquids containing silsesquioxane frameworks" and Miyauchi Kento from the department of Information Science and Biomedical Engineering for his presentation "Syntheses of Chondroitin Sulfate tetrasaccharide partial structures and their interaction analyses with GAG-building proteins by using SPR imaging"



Opening of the Kagoshima COC centre

The Programme for Regional Revitalization of Volcano and Island-rich Kagoshima was started in 2014 as part of MEXT's university COC enterprise programme.

The purpose of the COC (Centre of Community) is to gather personnel, information and techniques that can solve regional problems; to promote university-wide education, research and social contribution through cooperation with local governments and local communities, and to help strengthen those communities. In the period between 2014 and 2019 Kagoshima University plans to train determined personnel that can effectively tackle particular tasks in Kagoshima Prefecture such as disaster prevention, disaster relief and healthcare, agriculture and fisheries, water and energy resources, remote island healthcare, transportation of goods, regional education, tourism and so on.

As the core programme to promote the above goals and tasks, the Kagoshima COC centre was established at Kagoshima University on 1st October 2014. The centre will be the hub where the needs of local governments and regions are collected, where community-oriented research and education are promoted and where opportunity for lifelong education is offered to the whole university community.



Centre unveiling ceremony; From left: COC centre President, University President, Kagoshima Prefecture Vice Governor.

Kagoshima University Faculty of Medicine Regional and Islands Nurse Training Centre Opens

In 2014, MEXT started the Educational Programme for Support and Field Training Personnel in Remote/Island Locations as part of its Problem-solving Type of Advanced Training for Medical Personnel Programme. Based on the former programme, Kagoshima University's Faculty of Medicine started its Regional and Island Nurse Training Centre at the Department of Health Sciences.

The centre's programme is based on the following three principles: to train nurses who will attend to the people and the sick in remote areas; to develop a consistent training program for both before and after graduation as well as coordinate efforts between nursing universities, hospitals and nursing stations; to train personnel that will be up to the task of taking care of people in remote areas. The programme further aims to strengthen cooperation between the Kagoshima Prefecture Nursing Association and medical institutions on the islands and in remote areas as well as produce competent personnel that can contribute to the region.



Plaque unveiling ceremony. From right: Faculty of Medicine Dean, Dr. Sano, Centre President, Dr. Kisanuki

Comprehensive cooperation agreement signed with the Amami Islands Regional Office Association

An agreement for comprehensive cooperation was made between Kagoshima University and the Amami Islands Regional Office Association with the purpose of using Kagoshima University's intellectual resources for the development and promotion of the Amami Islands. Both sides will promote contribution activities on the community level, especially in the fields of establishing new industries and supporting existing ones, human resources development and regional disaster prevention measures. The establishment of the Amami Branch of Kagoshima University's Research Centre for the Pacific Islands next April with the aim of strengthening the cooperation.



Mayor of Amami City and President of Kagoshima University signing the agreement.