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INTERNATIONAL PARTNERSHIPS
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Top 2% of world universities
QS World University Rankings 2012/2013
Times Higher Education World University Rankings 2012/2013
Academic Ranking of World Universities (ARWU) 2012

Globally rated a five star university
QS World University Rankings 2012/2013
Australian Good Universities Guide 2013

Globally ranked as one of Australia’s best modern universities
33rd in the world — Times Higher Education Top 100 Under 50 Rankings 2012
30th in the world — QS Top 50 Under 50 Rankings 2012
VICE-CHANCELLOR’S MESSAGE:

PROUD PARTNERS IN A GLOBAL COMMUNITY

The University of Wollongong has a stated Vision: **To be a leader in ideas and solutions, a community of campuses and partners where discovery, learning and technology connect to transform people and the world we live in.**

Our international partnerships and relationships are integral to fulfilling this Vision, whether it is through research partnerships with institutions around the world, the international exchange of students and ideas, the on-shore and off-shore delivery of training courses to international students or participation in networks with common goals.

There is no question that the world faces massive challenges in the second decade of the 21st century and beyond. The search for solutions must be a global one – whether it is how best to deal with climate change, meeting the medical challenges of our times or ensuring the world can feed its rapidly growing population.

Education and research are the keys to this search for solutions, and it is certainly true that great ideas grow from strong partnerships.

At UOW we have a proud history of working collaboratively with organisations around the world. This brochure provides a broad overview of some of our global partnerships, ranging from providing training for government fisheries officers from small Pacific Island nations to help them better manage their vital fish stocks, to participation in global research networks searching for medical breakthroughs with the potential to save millions of lives.

Each partnership has been built up through mutual respect and trust, and each is important to UOW and to our partners. I invite you to peruse this brochure. Perhaps it will inspire you to join with us in our quest to transform people and the world we live in.

Professor Paul Wellings CBE
Vice-Chancellor
TWENTY YEARS STRONG

“Over the years, UOWD has developed significant training and research partnerships with major UAE organisations ... a range of Government Departments ... as well as multinationals such as Mercedes Benz, Virgin and General Electric.”

The University of Wollongong in Dubai (UOWD), which celebrated its 20th anniversary in 2013, is arguably Australia’s most successful off-shore higher education facility – thanks to a strong partnership with the host country.

From humble beginnings with a handful of students in 1993, UOWD has grown to an institution with more than 3600 students and around 200 staff at its campus in Dubai’s Knowledge Village.

UOWD was the first western university to open an operation in the United Arab Emirates, and has built a reputation as one of the leading universities in the Gulf region, attracting students from across the Middle East, North Africa, the Indian Sub-continent and beyond.

UOWD has 12 accredited undergraduate degree programs, 11 Masters degree programs and a highly regarded postgraduate PhD program, and is viewed by government officials as a preferred institution for providing professional development courses to their staff. Many employees of public sector agencies including Dubai’s Ministry of Health, Ministry of the Interior, Police, Customs, Electricity and Water Authority and the Dubai Municipality have completed postgraduate degrees at UOWD.

Over the years, UOWD also has developed significant training and research partnerships with major UAE organisations including Emirates NBD Bank, Emirates Airlines, Arab Media Group, the Dubai Quality Group, a range of Government Departments, such as the Dubai Police, the Financial Audit Department and the Dubai Courts, as well as multinationals such as Mercedes Benz, Virgin and General Electric.

Speaking at the 2011 Spring Graduation marking the 5000th graduate from UOWD, Australian Ambassador to the UAE, Doug Trappett, spoke of the Australian Government’s pride in UOWD’s achievements. “The pride is something that goes beyond the mere immediate tangible aspects of the University that we all know about – such as impressive facilities, its many thousands of students and its quest for higher academic standards. It’s to do with the desire to make a genuine contribution to the future of the United Arab Emirates,” the Ambassador said.
“During my 18 months in the UAE, it has been apparent to me on numerous occasions that UOWD is constantly striving to position itself at the forefront of the UAE’s ambitious nation-building agenda. UOWD has worked to deliver innovative, high-quality courses, but it has also introduced new courses and degrees which endeavour to meet national needs. “UOWD has also very much helped set the standard for all foreign universities operating in the UAE, or in any country in a globalized world. UOWD’s case shows that universities must work to establish genuine partnerships with the host country if they are going to be successful – in which case both the university and nation win. UOWD is succeeding in doing this. I know this because the most senior leaders in this country have told me so.”

Former UOW Vice-Principal (International) Dr James Langridge set up UOWD.

“From the beginning we were determined to be givers, not takers – to make a major contribution to the development of the UAE society and economy, just as an Australian university participates in the development of our society and economy. We made a conscious decision to understand the national aspirations of the Emiratis, and tailored our programs and the way we operate accordingly,” Dr Langridge said.

One of Dr Langridge’s first meetings in 1992 as he worked to establish the Institute was with the then Minister for Higher Education and Scientific Research, Sheikh Nahyan Bin Mubarak Al Nahyan. “I wanted to understand the Sheikh’s objectives for the higher education sector and sought his advice … because we wanted to work over time with the emerging Federal Ministry and later, the accreditation agency, to make sure we were delivering best practice in our participation in the development of their education system,” he said.

“That meeting led to Sheikh Nahyan personally inviting and endorsing our entry into the UAE, and I think the Emirati authorities have always appreciated the approach we have taken. The Sheikh continues to take an interest in the development of UOWD.”

In 2009 UOWD honoured the Sheikh’s contribution to education and science in the UAE by conferring on him the University’s first honorary Doctor of Letters – the first such award the Sheikh had accepted.

Far left - UOWD graduates celebrate the completion of their degrees.

Left - UOWD alumnus and Chief Executive of Dubai’s Rail Agency Abdulmajid Al Khaja (centre) opens the Career Development Centre at UOWD in 2008. Many UAE government officials have graduated from UOWD over the past two decades.

Below - UOWD’s campus in Dubai’s Knowledge Village.
MALAYSIA PARTNERSHIP BUILT OVER TWO DECADES

“The partnership is really enriching for both institutions. It is helping INTI develop as an international institution and is giving our courses a more international perspective.”

Round 1000 students are currently undertaking University of Wollongong degrees in Malaysia, under a partnership between UOW and leading South-east Asian higher education provider INTI International University and Colleges.

The partnership has been so successful, and the course offerings so popular since the program started in 2011, that the student numbers are expected to increase to around 3000 in coming years.

UOW offers a Masters degree in International Business and Bachelor of Commerce, Bachelor of Computing Science, Bachelor of Information Technology and Bachelor of Media and Communications degrees at INTI’s campuses at Subang Jaya in Kuala Lumpur and on the island of Penang.

Former UOW Dean of Education, Emeritus Professor Barry Harper, is Academic Dean of UOW’s program at INTI.

Professor Harper says UOW has had an association with INTI for two decades. “We started with fly-in, fly-out programs where UOW academics would travel to INTI colleges in Malaysia to deliver courses,” Professor Harper said. “In 2011 we entered into a new kind of partnership for full degree programs, where UOW supplies the curriculum and Quality Assurance, and INTI supplies the resources, space on their campuses, marketing, management and academic staff.”

The courses have the same entry requirements as UOW and follow the UOW curriculum. Students at INTI have a UOW ID card and email address, and access to UOW’s e-library and e-learning resources. They also have the option of receiving their testamurs from UOW graduation ceremonies at Wollongong.

“We have excellent academic staff at INTI teaching courses that are identical to those offered at UOW in Australia, so Malaysian students can get a high-quality, internationally-recognised degree without the expense of having to go overseas to study,” Professor Harper said. “This also means that they can choose to combine work with part-time study should they want to.”

Professor Harper said having the Malaysian course mirror the Australian version meant that students could choose to move to study at UOW at any stage of their degree. “We have a very versatile Study Abroad and transfer program which gives the Malaysian students the option to come to Australia for one or more sessions – giving them an international study experience at reduced cost,” he said.

While suitably qualified INTI staff teach the UOW courses in Malaysia, specialist academics fly in from Wollongong as required.

Above - Academic Dean for UOW’s Malaysian Programs Professor Barry Harper (left) with INTI staff.
Left - Professor Barry Harper admires a Malaysian bus decorated with UOW-INTI promotional material.
SINGAPORE COURSES HIT THE MARK

“Graduates have established a reputation with employers, recruiters and government as skilled, industry-ready workers.”

The University of Wollongong has long-standing partnerships with two of Singapore’s leading private higher education colleges, the Singapore Institute of Management (SIM) and the PSB Academy.

UOW works with these two long-established Singapore education and training institutions to deliver internationally-recognised academic programs in business, information technology and, more recently, psychology.

More than 2000 students have graduated from UOW-SIM specialised information technology bachelor degree programs since 2005 while UOW has been offering business programs at PSB since 2008.

PSB Academy was formerly part of the Productivity and Standards Board of Singapore, and has been instrumental in stimulating productivity improvement and innovation within the country’s workforce. UOW offers full-time and part-time business programs through PSB in select undergraduate majors, with graduates progressing into some of Singapore’s leading national and international corporations.

Singapore’s Economic Development Board established SIM in 1964 to fulfil a national mission to train and build a pool of highly skilled managers to support Singapore’s economic goals. Today, SIM is the largest private education institution in Singapore.

There are more than 2000 students currently enrolled in the UOW programs offered at SIM Global Education in various specialised information technology and computer science courses, as well as the recent addition of psychology.

Since UOW established its alliance with SIM in 2006, graduates have established a reputation with employers, recruiters and government as skilled, industry-ready workers with the flexibility and confidence to adapt to the ever-changing technological and business landscape.

A number of government agencies support the courses through internships and scholarships, including the Centre for Strategic Infocomm Technologies within the Ministry of Defence, which supports students undertaking the digital systems security major within the UOW Bachelor of Computer Science degree.

TEACHING TESOL IN THAILAND

“We created a fly-in, fly-out model for our lecturers that works really well to complement the work of the tutors in Thailand.”

Education academics in UOW’s Faculty of Social Sciences have had a long and close association with Thailand, sending trainee teachers there for practical training for more than 20 years.

In recent years UOW has extended the relationship to include the delivery of a Master of Education degree in Teaching English as a Second Language (TESOL) in a joint program with Assumption University in Bangkok.

The Masters program is targeted at English Language teachers at Thai high schools, to give them advanced strategies and methodologies to improve their teaching skills.

The program is delivered jointly by Assumption and UOW academics. Tutors from Assumption provide the tutorials while UOW lecturers travel to Thailand to deliver intensive sections of the course, while also providing on-line support to the students through the Faculty’s well-developed distance education systems.

UOW also provides the Quality Assurance oversight to ensure the graduates qualify for a UOW degree.

Assumption University’s Associate Professor Linchong Chorrojprasert, who graduated with a Master of Education from UOW in 2005 and heads UOW’s Thai Alumni Chapter, played a key role in establishing the UOW-Assumption TESOL Masters program. She said the program was designed to help Thai English teachers become better teachers through their contact with the Australian Lecturers.

The first students were all teaching English at St Gabriel’s College in Bangkok. “(Through this course) they have been doing much more than learning from books,” Professor Chorrojprasert said. “They have been living the (English) language, and are much more confident, and have gained experience in the theory and new technologies of language teaching.”

UOW Associate Professor Ian Brown describes the TESOL Masters program as an excellent example of international collaboration between two organisations. “We created a fly-in, fly-out model for our lecturers that works really well to complement the work of the tutors in Thailand,” Professor Brown said. “We feel this course has a very promising future.”

Thai Master of Education graduates from the first cohort of students who undertook the Teaching English as a Second Language program, came to Wollongong for their graduation ceremony in 2012 with some of their tutors. They are pictured with (front centre, from left) UOW’s Associate Professor Ian Brown, St Gabriel’s College Director Reverend Brother Dr Anusak Nidhibhadrebhorn and Assumption University’s Associate Professor Linchong Chorrojprasert.
SATISFYING CHINA’S HUNGER FOR KNOWLEDGE

“UOW’s decade-long association with the Chinese Academy of Social Sciences (CASS) has led to a number of important partnerships between the University and Chinese government organisations.”

When Beijing Municipal Government official Alison Teng Li spoke at her graduation ceremony at the University of Wollongong’s Sydney Business School in December 2012, she told guests that people in modern China weren’t hungry for food, they were hungry for knowledge.

The University of Wollongong is helping to feed that hunger.

Since 2010 the Sydney Business School has been training Beijing officials with Certificate of Management courses in Public Administration and Business Administration, as part of a partnership agreement between UOW and the Chinese Academy of Social Sciences (CASS).

CASS introduced UOW to the Beijing Municipal Government, which now sends around 20 senior officials to Wollongong each year for postgraduate study at the University’s Graduate School of Business, the Sydney Business School, at UOW’s Innovation Campus in Wollongong.

Ms Li, a Deputy Manager at the Economic Development Zone at Beijing Airport Logistics Park, was the group leader of the cohort of 20 students who studied at UOW in 2012. She graduated with a Certificate of Management in Public Administration.

“It was very different to the way I had studied 10 years ago, when we focused more on theory,” Ms Li said. “At Wollongong we benefitted from doing our research in the real world, doing assignments based on solving real world problems on how to manage people. I am coming away (from the course) with a much better understanding of human resources management.

“Most of us are in our late 20s or early 30s, so this has been a great benefit to have this hands-on experience. And as we are working with the government, we have a chance to influence the ways things are done in the future.”

UOW’s Director, Transnational Education and Alliances, Dr Bill Damachis said the partnership had been possible through the support of Professor Wang Xiaoming and her staff from the Global Centre for Culture and Education at the Graduate School of the Chinese Academy of Social Sciences.

“UOW has had a strong connection with CASS for more than a decade,” Dr Damachis said. “The relationship has given UOW a very strategic profile with the highest echelons of government in China and allowed us to leverage this relationship with other key government agencies including the Chinese Scholarship Council, which sends high quality PhD students to study at UOW.”

Dr Damachis said UOW had a number of other strong education partnerships with China, including a highly successful twinning collaboration between UOW’s School of Electrical, Computer and Telecommunications Engineering and Zhengzhou University (ZZU), the leading university in China’s most populous province, Henan.

Under the partnership, UOW academic staff teach a number of their subjects in intensive mode into the ZZU Bachelor of Engineering degree, with the opportunity for ZZU students to articulate to the equivalent degree at UOW. More than 230 ZZU students of high academic standing have articulated to UOW, and the Chinese Ministry of Education considers the program a model for international collaboration.
OVERSEAS STUDENTS PARTNERS FOR LIFE

“Now the University has a vast network of alumni around the world, many of whom have progressed to senior positions in government, industry and academia in their home countries.”

The University of Wollongong considers that every international student who studies at Wollongong becomes a potential partner and ambassador for life.

UOW pioneered international student recruitment by Australian universities in the late 1980s, when the Australian Government opened up the sector to overseas students for the first time.

Now the University has a vast network of alumni around the world, many of whom have progressed to senior positions in government, industry and academia in their home countries.

The University established the Wollongong English Language Centre in 1988 to provide English language training for overseas students before they started their degree. The centre immediately gave UOW a strong selling point, particularly in South-east Asia. Now called UOW College, it continues to provide pre-university language courses for overseas students.

The first full fee-paying international students came from Thailand and Indonesia, with other countries quick to follow. And what started as a trickle of students in the 1980s has become a major part of UOW’s operations. By 2013 close to 7000 students from all over the world – South-east Asia, China, the Indian sub-continent, the Middle East, Africa, Europe, North and South America and the South Pacific – were studying at UOW.

Wollongong was also one of the first Australian universities to recognise the potential of establishing student exchange and Study Abroad partnerships with American institutions, seeing the US as a vital foundation for its strategy to internationalise the University. UOW believed then (as it does now) that movements of students between Wollongong and overseas institutions would both broaden the experiences of the students who travelled abroad and those who stayed at home to be joined in the classes by overseas students with different perspectives on the world. UOW also saw it as an opportunity to build long-term relationships with US institutions that could develop in other areas, particularly research.

In 1988 it was the first Australian university to exhibit at the National Association of Foreign Student Advisors (NAFSA) annual conference in Washington D.C, seeking to reach out to the opinion-makers in the US higher education system. Wollongong quickly established important relationships with leading US institutions including the Universities of North Carolina (Chapel Hill), Massachusetts (Amherst), Indiana (Bloomington), Miami, California, Kansas, Nebraska and liberal arts colleges like Alma.

UOW now has Study Abroad and Student Exchange partnerships with 69 US universities and colleges, and with around 150 universities in 41 other countries. These include 14 in France, 13 in South Korea, 11 in Japan, nine in Canada, nine in Norway, seven in Thailand and seven in the UK.

INTERNATIONAL CREDIT TRANSFERS

Korean student Sungyou Bae made a small piece of UOW history in 2012 when she became the first graduate from the University’s international credit transfer partnership with META in the South Korean capital Seoul.

UOW has formal credit exemption arrangements with many overseas institutions, allowing students to reduce the normal full-time course duration by one or two years of study.

Sungyou, an outstanding student with consistently high academic achievements, graduated with a Bachelor of Commerce (Management) degree, having received credit towards her studies from META. This allowed Sungyou to complete the degree at UOW in two years instead of three, providing a significant cost saving while still providing her with her dreamed-of international study experience.

“I always wanted to study at an overseas university and my choice was between an American and an Australian university, but Australia is more laid-back and relaxed and that better suited my personality,” Sungyou said, adding that her time at UOW was “amazing”. UOW’s Faculty International Support Unit (FISU) Director Solveig Dewhurst said the University had credit transfer partnerships with hundreds of overseas institutions in China, India, Canada, Bangladesh, Colombia, Vietnam, France, Hong Kong, Indonesia, Saudi Arabia, Japan, Pakistan, Kenya, South Korea, Malaysia, Singapore, Sri Lanka, New Zealand and Thailand, as well as other Australian universities.

“We have a number of different and interesting ways for international students to articulate into our courses,” Ms Dewhurst said. “And we’re also looking at ways to send more of our students to Asia for part of their studies.”
MANAGING THE WORLD’S OCEANS

ANCORS EXPERTISE
A GLOBAL RESOURCE

“You can’t build fences on the ocean ... from food security, to resources to international transport links, managing our oceans properly is vital to maintaining a stable and sustainable world economy.”

Oceans cover 72 percent of the earth’s surface, and their management provides many of humanity’s greatest challenges.

The Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong is helping nations across the globe to meet those challenges.

ANCORS is a unique international research and training centre that plays a key global role in ocean management in areas including maritime security, maritime boundaries, ocean law, fisheries management and environmental issues.

ANCORS was established in 1994, and for the past three decades has provided a range of services to maritime nations including capacity-building training courses for navies and coast guards, consulting on international boundary disputes and management of ocean resources such as fisheries, and policy advice on critical maritime issues ranging from piracy and people-smuggling to terrorism threats and marine pollution.

ANCORS Professor Martin Tsamenyi is an international authority on maritime law who leads a multi-disciplinary team of specialist lawyers, political scientists, geographers, marine biologists and economists.

“Our philosophy is based on the idea that while oceans divide countries, they are also the link that connects countries,” Professor Tsamenyi said. “You can’t build fences on the ocean, so what happens on the ocean can affect many nations. For example, an oil spill in one country’s territorial waters may well affect other nations’ marine environments. And then there is the transnational impact of illegal activities such as people-smuggling or illegal fishing.

“From food security to resources to international transport links, managing our oceans properly is vital to maintaining a stable and sustainable world economy.”

The Australian Department of Defence and Australia’s international aid agency AusAID provide funding for the delivery of many of ANCORS’ training programs, particularly in South-east Asia and the Pacific as part of Australia’s aid contribution to neighbouring nations. The Department of Defence also provides 15 scholarships each year for Navy and Coastguard officers from Asia-Pacific nations to undertake the Master of Maritime Policy degree at ANCORS, alongside senior Royal Australian Navy personnel.

ANCORS activities include:
MARITIME SECURITY and OCEAN GOVERNANCE

ANCORS has provided capacity-building training courses to senior government officials and navy and coastguard personnel from nations across the Asia-Pacific region for so long that Professor Tsamenyi doubts there would be a senior public servant working on ocean issues in the region who has not completed an ANCORS course.

“For example, we have been conducting training courses at the Indonesian Navy’s Command and Staff College since 2000 focusing on the legal framework that governs the sea and maritime enforcement. A few years ago the Navy Chief gave me a long-service medal, because I had been involved with the college for such a long time,” Professor Tsamenyi said.

In recent years ANCORS has been invited to present its capacity-building courses to nations from East Asia and West Africa, in projects funded by the Australian Department of Defence.

Professor Tsamenyi said ANCORS prefers to conduct the courses involving officials from a number of countries, so that they can interact together. “We present a theme that creating understanding across different countries is fundamental to maritime security. You can’t resolve anything without international cooperation.”

Professor Tsamenyi said one regular ANCORS training project involved officials from nations from India to South Korea and across South-east Asia, who participate in simulated real-world scenarios where they have to work through the issues to create common understanding and cooperation.

FISHERIES MANAGEMENT

Fish is the most important protein source for many nations, particularly in the Asia-Pacific region where it represents up to 60 percent for some countries. "For Pacific island nations in particular, fishing is the most important economic resource," Professor Tsamenyi said. “Consequently, many disputes arise between countries over illegal fishing and the access to fishing grounds.”

ANCORS works closely with the Pacific Islands Forum Fisheries Agency – representing Australia, New Zealand and all Pacific island nations – developing a harmonised approach to fisheries management. Over the past five years ANCORS has developed a satellite vessel tracking system that allows these nations to monitor legal fishing and detect illegal fishing in their territorial waters.

Three times a year around 30 government officials from the region attend ANCORS training courses in international fisheries negotiations. “It is important that these countries have the skills to negotiate with the big fishing nations like Japan, Korea, the US, China and the European Union,” Professor Tsamenyi said. “Sometimes it may be only one official negotiating with large foreign interests, so it is important that they have the skills and knowledge.”
ANCORS works with nations in the Asia-Pacific region on a variety of other fisheries management projects, often with funding from Australian Government agencies. For example, ANCORS receives grants from the Australian Centre for International Agriculture Research (ACIAR) to work with Indonesia and The Philippines to develop policy and management frameworks for unregulated and unreported fishing in the myriad islands that make up the border between the two countries.

ANCORS Fisheries Governance Program Leader Dr Quentin Hanich has been invited to join the World Bank’s Global Partnerships for Oceans, which aims to tackle the global challenges of overfishing, pollution and habitat loss that contribute to the depletion of ocean ecosystems, as an expert reviewer. ANCORS has been invited to join the program as a research partner.

ANCORS also provides research partnerships and consulting services to the United Nations Food and Agriculture Organisation based in Rome and the United Nations Environment Program based in Nairobi.
“Research scientists from UOW’s GeoQuest Research Centre are working to provide governments of South Pacific island nations with accurate data about the changing nature of their islands and the sea that surrounds them.”

For some low-lying South Pacific island nations, the impact of climate change and rising sea levels is a threat that could decide if they have a future.

Research scientists from UOW’s GeoQuest Research Centre are working to provide governments of South Pacific island nations with accurate data about the changing nature of their islands and the sea that surrounds them, while one research project is attempting to “grow” sand.

Through their study of coral fossils from the coral atolls of Kiribati, GeoQuest researchers have been able to reconstruct past climate and sea level trends to help predict what may happen to these islands in the future.

Internationally renowned coastal geomorphologist Professor Colin Woodroffe, who has been conducting research in the South Pacific for close to three decades, and climate change expert Dr Helen McGregor head the research effort that includes PhD students from the region.

Much of their research is centred on Christmas (or Kiritimati) Island, the largest of 33 coral atolls and islands that make up the South Pacific nation of Kiribati. Christmas Island, at 338 square kilometres, is the largest coral atoll in the world.

Professor Woodroffe said its location at the western end of the El Niño area of the Pacific meant it is highly influenced by fluctuations in climate caused by the El Niño “effect” that is one of the largest drivers of global weather patterns.

Kiribati Government Coastal Manager Naomi Biribo has been working with GeoQuest as a PhD candidate on a scholarship from Australia’s AUSaid agency, researching whether her island nation is disappearing. She has been studying the impact of human activity as well as natural changes, mapping the changes by a detailed study of aerial photographs.

Professor Woodroffe said the GeoQuest team has been able to reconstruct sea temperatures and water levels for the past 5000 years by studying modern and fossil corals on Christmas Island, thus creating a picture of past climate change events and their impacts.

“Coral grows in bands, a couple of centimetres each year,” he said. “By measuring the oxygen isotope profiles in these bands in the coral we are able to measure the temperature of the water in which the coral is growing. Coral shows the same pattern of temperature fluctuations that we can see in meteorological records over the 100 years or so, so by studying the oxygen isotope profiles in coral fossils we are able to get a picture of temperature changes over thousands of years.”

Professor Woodroffe said there was clear evidence that sea levels were constantly changing. “For example, the sea level on the Great Barrier Reef was higher 6000 years ago than it is today, but our research shows relatively little change over this period in the central Pacific,” he said.

But that is of little comfort for people living on low-lying coral atolls today. They need to know whether sea level changes will endanger their communities.

Professor Woodroffe says coral atolls could still be growing, thanks to a tiny organism called foraminifera that lives in coral reefs and in seagrass beds in atoll lagoons. It has a tiny shell that becomes part of the atoll’s sand when the organism dies.

He is currently working with Fijian PhD student Ashishika Sharma, who is researching whether it is possible to grow foraminifera in an aquarium environment. Ms Sharma, who is a lecturer in the School of Marine Studies at the University of the South Pacific in Fiji, is working on the project in collaboration with the Japan International Cooperation Agency (JICA).

“If she is successful, she will be effectively be growing sand, so the importance of this research is obvious,” Professor Woodroffe said.
When Indonesian National Centre for Archaeology (ARKENAS) Director Dr Bambang Sulistyanto and Deputy Director E. Wahyu Saptomo visited the University of Wollongong in early 2013 for the launch of an archaeological exhibition featuring Homo floresiensis (the “Hobbit”), they weren’t only celebrating the ARKENAS/UOW collaboration on one of the great palaeoanthropological discoveries of modern times.

They were also celebrating more than a decade working with scientists from UOW’s Centre for Archaeological Science (CAS) and signing a Memorandum of Understanding for further collaboration.

UOW researchers Professor Mike Morwood and Professor Bert Roberts were key members of ARKENAS-led team that in 2003 discovered Homo floresiensis – a previously unknown species of tiny humans on the Indonesian island of Flores that had co-existed with modern humans until relatively recently.

Professor Morwood and Professor R.P Soejono from ARKENAS led the excavation team digging in limestone caves in Flores, where team member Mr Saptomo exhumed the skeleton of the one-metre tall female that helped change scientific thinking about the development of the human “family tree”.

Professor Roberts, an internationally renowned geochronologist, led the team of dating experts who used the latest luminescence technology to show that the skeleton was around 18,000 years old.

The team subsequently found skeletal remains of another 13 individuals in what has been hailed as one of the most significant palaeoanthropological discoveries of the century.

Professor Roberts said UOW’s collaboration with ARKENAS, which had begun in 2001, was continuing in Flores and in other parts of Indonesia including Sulawesi.

Professor Roberts said the ARKENAS partnership was extremely valuable and wide-ranging.

“It is a collaboration on all levels, not just a matter of ARKENAS issuing us with permits to work in Indonesia,” Professor Roberts said. “ARKENAS archaeologists work side by side with us as diggers in the field and in many other ways.”

Professor Roberts credits Professor Morwood with instituting a training program for the young Indonesian archaeologists they have been working with, who have now become experts in their field.

“One of Mike’s many contributions (to the partnership with ARKENAS) has been to train young Indonesian scholars, both in the field and by inviting them to Wollongong,” Professor Roberts said. “For example, one of our colleagues at ARKENAS, Thomas Sutikna, who was closely involved in the Homo floresiensis discovery, is now doing his PhD with CAS in Wollongong – developing new GIS (Geographical Information Systems) techniques for mapping archaeological sites.”

Above - Pictured at the opening of an exhibition featuring the “Hobbit” discovery at UOW in 2013 (from left): Professor Bert Roberts, ARKENAS Deputy Director E. Wahyu Saptomo, Professor Mike Morwood and ARKENAS Director Dr Bambang Sulistyanto.

Left - Indonesian archaeologist Thomas Sutikna, who is undertaking PhD studies at UOW’s Centre for Archaeological Science.
KOREA
BIONICS RESEARCH
AT CUTTING EDGE

“We were invited to join the World Class University project to share our expertise in developing global collaborative research networks, and our involvement has led to long-term partnerships with Korean researchers,” he said.

Professor Wallace is working with Hanbat on the establishment of a Global Research Centre in the new Korean city of Sejong, which has been established as a national administrative centre. Sejong will also have an international industry and science research belt focused on applied research, training and commercialisation of technology.

IPRI continues to collaborate with Hanbat in the generic area of energy for bionics, with Hanyang on developing artificial muscles and with ETRI on new ways to interrogate (investigate) living cells.

While the WCU project has now finished, Professor Wallace continues to work with Hanbat to build collaborative research alliances.

Hanbat has also appointed him Visiting Professor in International Affairs for 2013-2015.

Professor Wallace, who visits Korea four or five times a year, says there are regular exchange visits between Korean and IPRI/ACES researchers, while IPRI consistently hosts three or four Korean PhD students.

IPRI has other significant international alliances in the United States, Europe, India, China and Hong Kong, Taiwan and Japan.

Professor Gordon Wallace shows Hanbat University President Professor Won Mook Lee through a laboratory at the Australian Institute for Innovative Materials at UOW’s Innovation Campus in Wollongong.
RESEARCH PARTNERSHIPS

CHINA
ENERGY FOCUS TO STEEL PACT

“As their contribution to the centre’s research, ISEM researchers are developing an advanced electrical conversion system to help Baosteel harness the energy currently lost in heat escaping during the steel-making process.”

UOW’s Institute for Superconducting and Electronic Materials (ISEM) has forged a partnership with the giant Chinese Government-owned steel company Baosteel to improve the energy efficiency of its steel plants by developing new ways to capture heat from steel-making processes and convert it to usable energy.

UOW played a key role in Baosteel establishing the $25 million Baosteel-Australia Joint Research Centre, and UOW is one of four Australian university partners at the centre. The other partners are the University of Queensland, the University of NSW and Monash University.

Baosteel describes the centre as a world-first joint venture dedicated to an enduring partnership between one of the world’s largest steel companies and the four Australian universities to explore and develop new knowledge and technologies. Priority themes are innovative materials, new energy, resource utilization and advanced environmental technologies.

As their contribution to the centre’s research, ISEM researchers are developing an advanced electrical conversion system to help Baosteel harness the energy currently lost in heat escaping during the steel-making process.

“Current steel-making processes only capture about 40 percent of the heat generated by blast furnaces, which means 60 percent is being wasted,” ISEM Director Professor Shi Xue Dou said. “So there is the potential for significant cost savings for Baosteel by developing a device to capture that wasted heat and turn it into electricity.”

Professor Dou said the research project started in late 2011 and had a three-year target to have the device developed to the prototype stage. “We’re making good progress and are comfortable that we can achieve that,” he said.

Professor Dou said Baosteel had provided seed funding for the research of $680,000 over three years, which ISEM had been able to leverage into Australian Research Council grants for related research, including the Baosteel-sponsored auto CRC research into the development of electrical vehicle power systems. “The scale may be different, but the idea of capturing heat from a vehicle exhaust or a blast furnace and turning into energy is essentially the same,” Professor Dou said.

“Leverage from the Baosteel contribution has allowed us to win other grants to fund more Research Fellows and PhD students at ISEM. Industry partners (like Baosteel) who put money into research are very important, because they demonstrate (to the funding bodies) the seriousness of the project.”

Professor Dou says the Baosteel collaboration is an excellent example of ISEM’s partnerships with Chinese corporations, universities and research institutes, and demonstrates the importance of having strong personal ties when dealing with China.
INDIA

UOW JOINING MINING CENTRE

“The centre is designed to help India develop world best practice in mining operations, and to help develop a better understanding in India of the complexities and challenges that mining presents.”

The University of Wollongong has signed a Memorandum of Understanding to help form a Centre of Mining Excellence in the Indian state of Gujurat.

UOW, which has considerable history and expertise in Mining Engineering, is the Knowledge Partner in the proposed Centre of Mining Excellence which will be established in the city of Ahmedabad.

The Gujurat State Government is establishing the centre, supported by industry partners Gujurat NRE Coke Limited, Gujurat Mineral Development Corporation Ltd and Pandit Deendayal Petroleum University (PDPU). UOW also has a separate agreement with PDPU, located in Gandhinagar, the capital of Gujurat state, for collaborations ranging from research partnerships to student exchanges.

The Centre for Mining Excellence will establish a strong presence in the key areas of mining technology and services, with a focus on automation, health and safety, mine planning and mining efficiency. It will look to identify and develop emerging global best practices and tailor them to the Indian environment.

The centre will act as a combined technology and technical centre with a focus on research and innovation. It will also serve as an educational establishment for skill development for people working in the mining industry in India and across Asia.

UOW has a strong relationship with Gujurat NRE, which operates a large coal mine in Wollongong and has a well-established presence in the city.

UOW Vice-Chancellor Professor Paul Wellings signed the MOU during a visit to India in late 2012. UOW’s involvement with the Centre of Mining Excellence is the latest partnership with Indian organisations. In May 2012 UOW announced that it was working with India’s premier industrial research and development organisation, the Council for Scientific and Industrial Research (CSIR), to establish a dedicated CSIR Research and Development Centre at UOW’s Innovation Campus in Wollongong.

Under the arrangement, UOW and CSIR are developing research and development collaborations in areas including advanced steel metallurgy, lithium-ion batteries, super capacitors and polymer-based nano-composites.

Above - UOW Ambassador to India Adam Gilchrist (left) pictured with UOW Vice-Chancellor Professor Paul Wellings in front of Mumbai’s Gateway of India monument during a visit to India in 2012. The former champion cricketer plays a key role in forging links between UOW and leading Indian organisations.

Right - Signing the agreement between UOW and India’s Council of Scientific and Industrial Research (CSIR): Professor Ramesh Budhani (seated left) signs on behalf of CSIR with UOW Vice-Chancellor Professor Paul Wellings, watched on by CSIR Director-General Professor Samir Brahmachari and UOW Deputy Vice-Chancellor (Research) Professor Judy Raper.
CA
AS CONNECTION

The University of Wollongong has a partnership with the prestigious Chinese Academy of Sciences (CAS) to expand academic, research and educational exchanges between the two institutions.

UOW Vice-Chancellor Professor Paul Wellings CBE and CAS Vice-President Professor Jinghai Li formally signed the agreement in 2012 to facilitate greater cooperation in the priority areas of energy, the environment, materials and electronics, academic and student exchanges and the development of dual PhD programs.

“The University has a long term engagement with China and the formalisation of our relationship with the Chinese Academy of Sciences connects us more closely with one of the world’s leading research institutions,” Professor Wellings said.

CAS is China’s highest academic institution in natural sciences and principal scientific and technological advisory body. It has more than 100 national key laboratories and national engineering research centres, around 1000 field stations and more than 50,000 staff.

Professor Li said he looked forward to a long term, productive and far-reaching relationship with UOW. “The Chinese Academy of Sciences attaches a great deal of importance to key international cooperative activities such as this one with the University of Wollongong,” Professor Li said. “We have established strong relationships with leading research institutions around the globe and we are looking forward to working with academics at the University of Wollongong in the important areas of energy, materials science and electronics.”

Professor Wellings said that this collaborative research partnership will not only help drive research breakthroughs that will assist in solving global problems but it will also help to develop the people-to-people links and the networks that will be essential to future innovations and research success.

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LESSONS FROM
WILDLIFE
CONSERVATION

“The persistence of those species and their habitats in the world’s second most populous nation creates a significant opportunity to understand cultural relationships with wildlife and ecosystems.”

UOW academic is working with Indian colleagues to develop a collaborative research program focusing on the relationship between tribal knowledge and wildlife conservation.

Associate Professor Michael Adams from the Australian Centre for Cultural Environmental Research (AUSCCER) and the Indigenous Studies Unit is working with colleagues at two non-government organisations (Dakshin and the Ashoka Trust for Research in Ecology and Environment), and the Indian Institute of Science in Bangalore to develop pilot projects to investigate tribal knowledge of animals and how this can connect to current wildlife policy.

India has 80 million Indigenous people (classified as ‘tribal’ in legislation). Researchers are looking at Kuruba tribal people’s knowledge of how wild elephants use different landscapes and respond to humans to contribute to management responses where there is human-elephant conflict. The researchers are also looking at the relationship between Soliga tribal people’s knowledge of fire and contemporary landscape management.

Professor Adams met with senior Kuruba elephant tamers and Soliga tribal elders in two national parks in South India to learn more about their aspirations and discuss possible projects.

India covers 2.4 percent of the world’s land area and houses 17 percent of the world’s human population. It simultaneously contains eight percent of the world’s mammals and 12% of the world’s birds, and is considered one of the world’s biologically ‘megadiverse’ countries.

Professor Adams points out that “the persistence of those species and their habitats in the world’s second most populous nation creates a significant opportunity to understand cultural relationships with wildlife and ecosystems.”

Elephants are a defining image of India, and the nation’s success in wildlife conservation provides a valuable lesson for Australia.
GLOBAL MEDICAL RADIATION NETWORK

“Many of our PhD graduates have moved on to research institutions around the world, but they retain their links with our centre in Wollongong and have helped us build an extensive international network for collaborations and partnerships.”

CMRP specialises in fields ranging from innovative cancer treatments such as radioactive seed implant brachytherapy for prostate cancer and high dose rate brachytherapy and intensity modulated radiation therapy for treating tumours in the head and neck, to detection instruments for hazard radiation in space and avionics environments.

Over two decades the centre has developed partnerships and collaborations with many of the world’s leading medical centres, oncology research institutes and government agencies. For example, CMRP’s expertise in space and avionics radiation protection has been developed in partnership with the National Space Biomedical Research Institute in the United States and the US Navy Academy Aeronautical Department.

CMRP played a key role in developing space qualified instrumentation for assessment of radiobiological effects of cosmic radiation on humans during long-term NASA space missions. Under its founding Director, internationally-acclaimed nuclear physicist Professor Anatoly Rozenfeld, CMRP has developed its extensive international network through high-level research collaborations and through its reputation for developing world-leading radiation instrumentation and measuring devices that are used by other research institutes.

Professor Rozenfeld has a wide network of collaborators both overseas and within Australia at leading research organisations including the CSIRO and the Australian Nuclear Science and Technology Organisation (ANSTO), where he is a member of its steering committee for the development of heavy ion therapy.

CMRP’s reputation for world-class training has also played a key role, with many medical radiation physicists around the world having undertaken PhD research studies in Wollongong at CMRP.

“Personal contact is very important in a specialised field like this, so I share time between UOW and centres overseas,” says Professor Rozenfeld. “Many of our PhD graduates have moved on to research institutions around the world, but they retain their links with our centre in Wollongong and have helped us build an extensive international network for collaborations and partnerships.”

CMRP has collaborations with leading radiation oncology institutions around the world, including the Memorial Sloan Kettering Cancer Centre in New York, the Loma Linda University Medical Centre in California, the Massachusetts General Hospital Proton Therapy Centre and Wisconsin Comprehensive Cancer Centre, as well as the Department of Nuclear Imaging at John Hopkins University in Baltimore, widely regarded as the world’s leading medical school.

Other collaborating centres include the European Synchrotron Radiation Facility in Grenoble, France, the London University College, Brunel University and Rutherford Appleton Laboratory in the UK, Heidelberg University in Germany and advanced microelectronics facilities in Ukraine and Russia.

In Asia, CMRP’s partnerships include the Sun Yat-Sen University Cancer Centre in Guangzhou, where the Head of Medical Physics Professor Xiao-Wu Deng is a UOW PhD graduate, and the University of Malaya Research Imaging Centre, where senior academic Dr Jeannie Wong also is a UOW PhD graduate.

Professor Anatoly Rozenfeld (fourth from left) with international delegates to a conference the Centre for Medical Radiation Physics hosted at UOW. The centre has a wide network of partners and collaborators around the world.

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Professor Anatoly Rozenfeld (fourth from left) with international delegates to a conference the Centre for Medical Radiation Physics hosted at UOW. The centre has a wide network of partners and collaborators around the world.
GLOBAL REACH

GLOBAL CHALLENGES

At UOW, we believe in thinking globally, acting locally. We know that tackling challenges in our own backyard is the first step towards solving the greater, global issues of the 21st century. Our Global Challenges Research Program brings together researchers from a variety of disciplines to work together on three of Australia’s biggest challenges: managing an ageing population, coping with industrial transformation and sustaining coastal environments. By harnessing the expertise of existing as well as emerging UOW research strengths, we are rethinking our past to redesign our future.

Read more at www.uow.edu.au/research/globalchallenges/index.html
WHY NOT JOIN US TOO?

We hope this brochure has given you an insight into some of the many ways in which the University of Wollongong reaches out to the world.

If you would like to explore the potential for partnerships with one of Australia’s most innovative and dynamic universities then please contact our International Office.

We would love to hear from you.

PROFESSOR JOE CHICHARO
DEPUTY VICE-CHANCELLOR (INTERNATIONAL)