



TEXAS STRATEGIC PARTNERSHIP

Swansea University's strongest international partnership is to be found in Texas, a partnership which encompasses eight leading universities and medical institutions, including the University of Texas at Austin, Texas A&M University, Rice University, the University of Houston, Baylor College of Medicine and Houston Methodist Research Institute.

The Texas partnership is distinctive because of the breadth and depth of research, teaching and mobility activities which reach across all Academic Colleges. This edition focuses on some of the teaching collaborations that are bringing benefits to students and staff at both Swansea University and its Texas partner institutions.

Prof Ian Pallister from Swansea University Medical School received a Texas Collaboration Funding Award to develop a collaboration with colleagues in the Texas Medical Center.

His visit sought to establish a collaboration with Texas A&M Health Science Center and Houston Methodist Research Institute (HMRI) which focuses on the use and impact of simulation models in medical education.

A consultant in trauma and orthopaedics, Prof Pallister has developed state-of-the-art surgical simulation models to improve training for students on Swansea University's MSc in Trauma Surgery. These models use custom-made silicon which replicates the physical properties of human tissue

and include circulatory systems to reproduce arterial bleeding, giving students the opportunity to practice emergency bleeding control.

Prof Pallister shared his experience of delivering simulation-based education with colleagues who are developing a module on compartment syndrome to be delivered at HMRI, and demonstrated the use of the simulation model in teaching to a group of medical students.



In June 2018 14 Swansea University students travelled to Texas to participate in an exclusive Summer Innovation Programme at Baylor College of Medicine in Houston.

The students, all from BSc Applied Medical Sciences, were the second cohort to take part in the programme which saw them spend six weeks working on innovation projects, undertaking clinical shadowing and surgery observations, and learning about medical device programming, biodesign processes, and intellectual property.

The students' group project was to develop a fully implantable, durable artificial lung as an alternative to current technologies and which could offer patients greater mobility and improved quality of life.

The students were also able to participate in surgical simulations using state-of-the-art virtual and augmented reality technology, and

were hosted on a visit to Austin by patent attorneys from Husch Blackwell LLP and faculty from UT Austin's Dell Medical School.

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The facilities at Baylor College of Medicine are truly superb and awe-inspiring. It was an amazing experience to see how these facilities are being utilised to improve healthcare.

It highlighted the power of medical innovation and research and why this sort of work is so unbelievably important.”



Mary-Ellen Courtney
BSc Applied Medical Sciences

230

Students exchanged since 2013



£250,000 EXTERNAL SCHOLARSHIP & MOBILITY FUNDS AWARDED

178

JOINT PUBLICATIONS


19,000 Citations





TEACHING COLLABORATIONS

The Texas Strategic Partnership allows students and staff in both Swansea and Texas to benefit from collaborations in teaching such as joint programmes, sharing of expertise and best practice, and collaborative student initiatives.



A collaboration between academics from Swansea's School of Law and the University of Houston Law Center has given Swansea students the opportunity to engage with school and community groups about the law.

Swansea's new module in Street Law tasks students with developing and delivering sessions on selected law topics as part of a legal education programme delivered free to schools and community groups. The programme empowers audiences by informing them about the law, legal system and human rights, and gives students the opportunity to gain skills and confidence in communicating complex areas of law to members of the public.

The module - co-ordinated by Hannah Bussicott and Prof Jane Williams, Director of Swansea's Observatory on Human Rights of Children - draws on the expertise of Prof Ellen Marrus, a University of Houston academic who specialises in juvenile law, children's rights and professional ethics, and who established a course in Street Law in Houston in 2016.

Since its introduction in 2017, Street Law sessions have been delivered by Swansea students to over 300 young people in schools and youth clubs, and this number is expected to double by the end of 2018.

The programme has attracted the interest of Government Ministers and members of the Welsh Assembly and will be the focus of a forthcoming visit to Swansea by Shadow Justice Minister, Christina Rees MP.



A collaboration between the Jackson School of Geosciences and the Department of Geography has allowed students at UT Austin to benefit from the expertise of Swansea academics.



Swansea's Prof Mary Gagen - a climate scientist who specialises in looking at how climate has changed in the past, and what clues that gives us about how it might change in the future - contributed to Dr Ginny Catania's 'Earth in 2100', a new online module which develops students' knowledge of the science behind climate change, its potential impact, and the challenges facing the energy industry.

Prof Gagen's contribution focused on palaeoclimatology, long term climate changes that have taken place over millions of years, as these can reveal the role played by greenhouse gases in determining the planet's temperature:

“*It can seem strange to look way back in time in order to figure out how our climate will change in the future but that is a core concept of climate science – the past is the key to the present and future!*”

Earth in 2100 is a fantastic module because Ginny is creating lots of online content, from specialists, that the students can work through in their own time and combine with classes. It's a really powerful learning combination.

Ginny has created a really novel and passion-driven module, which is so important in the study of climate change. Her plans for the module include setting up virtual field courses too and we're hoping to grow this collaboration and look at bringing some of Ginny's novel teaching methods to our geography classes in Swansea.”

In 2012 Swansea University established a Collaborative PhD programme with Houston Methodist Research Institute (HMRI), the research arm of the Houston Methodist Hospital system.

Located in the Texas Medical Center, HMRI aims to transform medicine by bringing together interdisciplinary teams which can bring a range of technologies and perspectives to medical challenges.

The collaborative PhD - which emerged from research collaborations in Nanotechnology - enables students to spend the first year of their PhD at Swansea and the second and third years in Houston. Seven students have participated in the programme to date, with research projects focusing on topics such as cartilage repair, disease diagnostics, ovarian cancer and prostate cancer.

The programme's first graduate was Matthew Ware who went on to work at Baylor College of Medicine and helped set up the Summer Innovation Programme for students from Swansea's BSc Applied Medical Sciences.



Following a fact-finding visit to Texas partner universities, Swansea University has developed new 'active classrooms' on its Singleton and Bay campuses which allow academics to integrate learning technologies into their learning and teaching.

These active learning spaces are equipped with state-of-the-art technologies which support teamwork and collaborative learning and are expected to enhance both student engagement and learning outcomes.

The College of Engineering active classroom will be showcased to students, staff and visitors when it is used for *Invent for the Planet* in February 2019.

Led by Texas A&M University, *Invent for the Planet* is a 48 hour student intensive design experience involving 50 universities in 20 countries. Swansea students will use the classroom's facilities for both their team project and to liaise with student teams from around the world.

 **Read more at**
swansea.ac.uk/texas/teaching/iftp



Simone Pisano from Italy arrived in Houston in May 2018 to begin his second year on the collaborative PhD.

His doctoral research focuses on the development of new therapies to treat ovarian cancer which use the body's own biological nanoparticles to re-stimulate the immune system against the tumour.

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Houston Methodist Research Institute is a unique place where leading experts from a range of scientific fields merge to form a multidisciplinary environment.

In order to find a final cure for cancer we need to approach it from different perspectives, and somewhere like Houston Methodist is the perfect place to do this.

Houston is a very multi-cultural city with many different languages, cultures and restaurants, so it's ideal for someone like me that loves food! The city is very big with lots of events and things to do, and the weather is amazing!”



ALUMNI NETWORK IN TEXAS

The University has 4,500 alumni in North America, of which around 100 are in Texas. In conjunction with the Development and Alumni Relations Office, the Strategic Partnership team has sought to connect with alumni around the state with a view to developing a vibrant alumni network in Texas.

Alistair Barnes from East Sussex graduated from Swansea University in 1990 with a degree in Chemistry and Management Science.

He moved to Houston shortly afterwards to work in the insurance industry and since 2009 he has worked for AmWINS group, one of the largest wholesale insurance brokers in the US.

In Houston Alistair founded Mission Squash, an intensive urban youth enrichment programme which aims to give young people from underprivileged homes the opportunity to make a better future for themselves through academic coaching, squash training and community service.



SPOTLIGHT ON ... UNIVERSITY OF TEXAS AT AUSTIN

Founded in 1883, the University of Texas at Austin is the flagship institution of the University of Texas System. Its 430 acre campus is located in the heart of Austin and is home to more than 51,000 students.

It has been ranked as one of the top 20 public universities in the US (U.S. News & World Report) and is ranked 39th in the Times Higher World University Rankings 2019.

The University's Harry Ransom Center holds one of the largest collections of work by Swansea-born poet Dylan Thomas and over 8,000 literary artefacts are being digitised in a joint project with Swansea which is due for completion by early 2019.

Other collaborations with Swansea include 35 joint publications since 2012, 29 guest lectures, and 23 students exchanged since 2015.



TEXAS NEWS IN BRIEF

Dr Grazia Todeschini from the College of Engineering has had three papers published with colleagues from the University of Texas at Austin.

The papers - published in *IET Power Electronics* and *IEEE Transactions on Power Delivery* - are based on research collaborations developed following Dr Todeschini's receipt of a Texas Collaboration Funding Award.

In August 2018 Dr Eoin Price from the Department of English Literature and Creative Writing arrived at UT Austin for a month-long fellowship at its Harry Ransom Center.

Dr Price worked with the Center's 18th century Drury Lane promptbooks and its extensive London playbill collection for his new project, *'Early Modern Drama and the Jacobean Aesthetic'*, which challenges entrenched ideas about the genres of Jacobean drama. Dr Price presented some early findings from his research on the work of John Fletcher and Philip Massinger as an invited speaker at the London Shakespeare Seminar in November.

Dr Anthony Charles and two postgraduate research students from the School of Law visited Houston to present their research on youth justice and children's rights to colleagues and students at the University of Houston Law Center.

Whilst in Houston they also met with youth court judges, detention officers and young people at the Harris County Juvenile Detention Centre.

A research collaboration between Prof Sarah Nicholls from the School of Management and colleagues from the Department of Recreation, Park & Tourism Sciences (RPTS) at Texas A&M University will see the publication of a co-authored book on the impact of green and blue spaces on property values in 2019.

Another collaboration with RPTS colleagues builds on shared interests in work-life balance and a paper on the role of vacation as a boost to physical and mental health is in preparation.

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