

A FUTURE FOCUS

Vice-Presidents Professor Kerstin Mey and
Professor Norelee Kennedy speak of a
bold new vision for University of Limerick

U L I N K S



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WELCOME TO UL LINKS

Institutions, organisations and Universities are all about their people and their stories. With that in mind, it gives me great pleasure to present the 2020 Spring issue of UL Links which is filled with stories from our community, both on and off campus.

Stories from the areas of research, innovation, arts, our students and alumni, are just some of the sections covered in this refreshed edition of UL Links.

While every story is filled with merit, some notable inclusions in this latest edition include interviews with our vice presidents. Professor Norelee Kenedy, who started in January as the new VP for Research, speaks on the future focus of research at UL, while Professor Kerstin Mey, VPAASE, talks to UL Links on transforming education through teaching and learning.

We have a detailed announcement on our new partnership with the Algerian Government for the delivery of an International PhD that will allow their universities to migrate from teaching through the medium of French, to teaching through the medium of English.

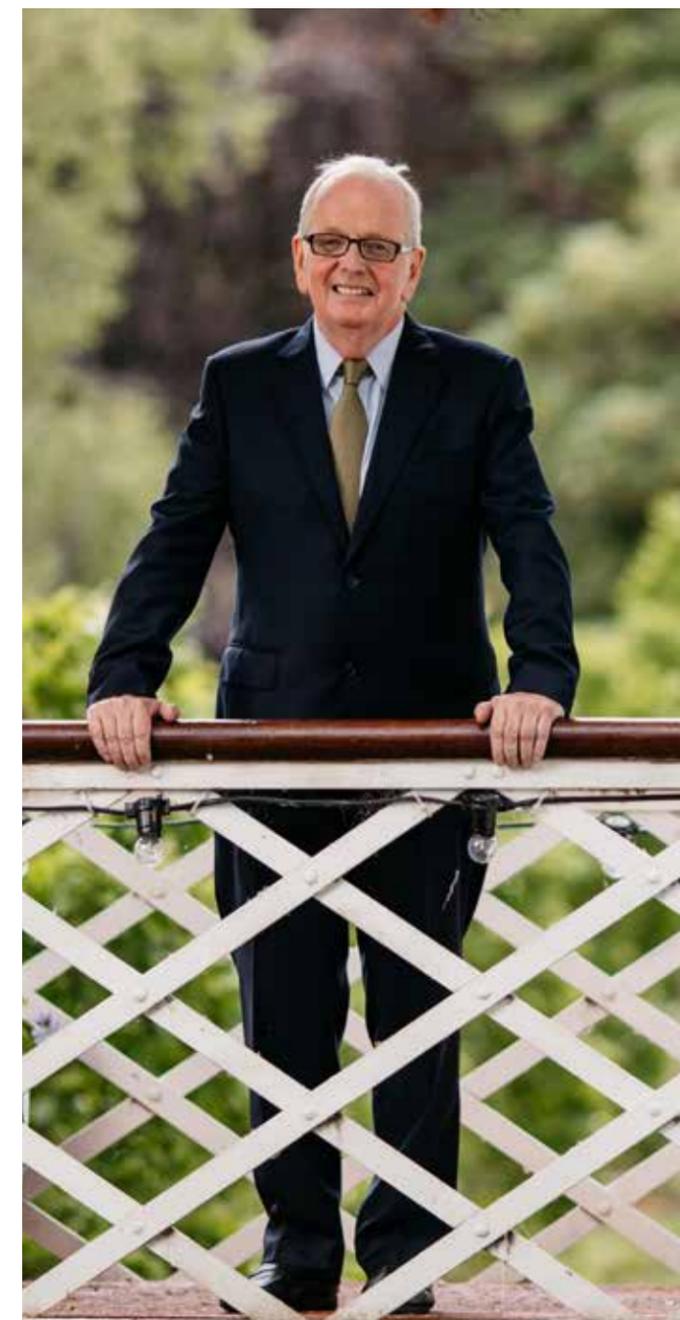
Professor Michael Zaworotko talks about "the secret sauce" in the crystals that will save the world. Our student stories focus on some of the best at UL, including Ciara Neville and her bid for athletics success at the Tokyo Olympics later this year, while KBS student and social entrepreneur Jack O'Connor talks about his seed planter invention and attending the UN General Assembly as an Irish representative.

With an alumni of more than 105,000, success stories are both wide-ranging and plentiful. CEO of Junior Achievement Ireland Helen Raftery talks to us on her engagements to inspire and motivate young people, while UL alumnus and COO CPO of Elvie, Jonathan O'Toole, introduces us to the world's first silent breast pump, his company's product that made the top 100 inventions of 2019 on the cover of Time Magazine. Perfect for every magazine read is a coffee and Dr Kevin Moroney reveals his research into the maths behind making the perfect cup.

Amongst the many features published in this edition is an interview with singer songwriter Emma Langford, as well as a four-page special focusing on our international students and in particular a feature with Zohra Codday, an Irish World Academy MA student whose love of Irish music spans continents.

There are so many inspiring stories in the Spring 2020 edition of UL Links and many more will be available online. So I invite you to browse through the amazing array of UL people and share the stories of those who are having such positive impacts on society, locally, nationally and internationally.

Dr Desmond Fitzgerald
 President, UL
 @ULPresident



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CIARA NEVILLE - AN OLYMPIAN IN WAITING

In conversation with Ciara Neville, the 20-year-old rising athletics star and UL scholarship student talks to UL Links about her goals for 2020, including a bid for Tokyo Olympic success



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PROFESSOR NOREEE KENNEDY: NEW VPR FEELS ‘A SENSE OF RESPONSIBILITY’

Research is at the very core of everything Norelee Kennedy does. It is in her fibre, her very being. After accepting the role as the new Vice-President for Research (VPR) at University of Limerick in July, she promptly took a four-month period of research leave before starting in the job.

Professor Noreen Kennedy, to give her full name – Norelee is a “family name that stuck,” she explains – has worked as an academic in UL for 15 years. The now former Associate Professor of Physiotherapy and Head of School of Allied Health in UL is a Tipperary native who graduated from Trinity College Dublin with a BSc Physiotherapy in 1999 and a PhD in 2004.

Her research focuses on inflammatory arthritis and physical activity in exercise – and it will continue in her new role as VPR, as it did while she was head of school. There is still work to do for Norelee, who alongside being an academic leader, has been awarded almost €3m in research funding from national and EU funders.

“I used to try and keep Tuesday as a day to focus on research,” she explains of her previous role. “At least psychologically, you knew you had that, and I am trying to do similar here. The reality is that things will get in the way. That is fine – and it is extremely ambitious.

“There are 24 hours in the day! I am quite highly organised, because I have to be. The initial learning of a job is incredibly busy because you have to read everything to know what you are doing and what you are not doing. But you do have to trust people and allow people who know what they are doing and have done it for a long time to advise you,” she adds.

Professor Kennedy graciously agreed to meet UL Links at the end of her first week in the role to talk about her plans for the future of research at the University, how she ended up in the position and her career to date.

It is a rainy Friday in January as she sits at the desk in her new office in the Foundation Building and casts an eye out over the campus landscape.

Asked if it is an exciting time to be joining the senior leadership of UL, Norelee has a quick as a flash response: “Absolutely it is. Every phase brings something new. >



Picture credit: True Media

> There is no shortage of ideas, energy and enthusiasm and I think it is a new phase – I like that. I get energy from new things.

“I have learnt enough over the years to know what motivates me – and every so often I threaten to go and learn how to play golf and do nothing else, but a few failed attempts on that and my poor husband does say ‘please go to work because you drive me mad wanting to paint another room,’” the new VPR laughs.

“I know UL well and I know how fantastic the place is, with a fantastic group of people who are very committed and passionate about UL and the region,” she adds.

Norelee has progressed at every level within UL, working as lecturer, senior lecturer, associate professor and head of school. It has given her a perspective on the inner workings of the University, while reaching the position of VP has filled her with a sense of responsibility.

“I suppose it is that realisation of the enormity of the place and the role. You do have a huge sense of responsibility,” she explains.

“I would be naturally somebody who looks for new challenges, so every five years things have suddenly seemed to arrive – timing is everything in life I think.

“The environment here enables people to do that. I have always found that a very positive thing about UL and working here is that the environment is so conducive to innovation and trying new things and doing new things.

“

It is a fantastic campus with fabulous facilities – we are very fortunate. I do feel very privileged to be able to take on this role and my hope is by the end that we are stronger and have continued to further develop from the excellent base that we have

- Professor Norelee Kennedy

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“I suppose by the nature of the discipline that I come from and the way we teach our students in health professions, is very much focused on that notion of reflection and self-awareness and professionalism, so you bring that to everything that you do and you are thinking ‘why am I doing this’? Is there a better way? That has certainly influenced me hugely as well.

“UL is known for being innovative, creative and dynamic – we live that, and making sure we continue to do that as a University for our students, is important,” she adds.

Since 2014, the global reach of UL’s research collaborations

has reached nearly 2,000 organisations in over 100 countries, with total research income at €277m. The job of work ahead of the new VPR is a big one – and she knows it. She is determined to build on the existing research strengths and successes with the University’s academic and industrial partners and the research centres that are located on campus.

“Research should be at the heart of what we do and is fundamental to everything that we do at UL,” she explains.

“It is such an exciting opportunity to look at the next phase of research for UL. We have an excellent base in what we are doing in our research here and I think there are opportunities to look at new ways of bringing people together to work in interdisciplinary ways.

“We do need to broaden our base of research; look at things that we are doing and how we are doing it and maybe adding more supports or structures.

“There is an internal arm to the focus of the role that I want to bring to it – how we do what we do in UL, but then there is the outside piece about how we can influence and build and position ourselves.

“I see a lot of synergies between what I do as VPR and what Kerstin Mey does as Vice President for Academic Affairs – they are certainly not mutually exclusive and they need to work coherently.

“Kerstin and I, as academics, are both very keen about having synergies across research and teaching. Absolutely the best experience for students is when you can have them exposed to the coalface of research.

“Being mindful of that, there is a whole side of work in the VPR role in industry and our external relationships – that is very, very important and I am going to work with the research office as to how we do that, ways to optimise that networking, that connecting, that continuing to build our industry partnerships.

“I have spoken to some key external funding people recently and they see UL as very strong players in research – particularly around Bernal, Lero, the HRI and what is emerging around health research.

“They see our interdisciplinarity as a strength and would advise us to build on that.

“It is fantastic, absolutely fantastic what they are doing in Bernal. You can see the development of a very strong fabric of legacy now developing and it is getting stronger, growing and developing,” she adds.

Norelee fully intends to lean into her expertise in health, calling cancer research “the next frontier” for UL.

“I am very confident for the future of health research at UL,” she confirms.

“I think it can have added value in our data and digital space, I think there is huge potential for that. We are at a good time, where we have a very solid foundation to grow our base from, and that is very important.

“It is a fantastic campus with fabulous facilities – we are very fortunate. I do feel very privileged to be able to take on this role and my hope is by the end that we are stronger and have continued to further develop from the excellent base that we have.”

- Alan Owens

PROFESSOR KERSTIN MEY: VPAASE ON TRANSFORMING EDUCATION

When the new position of Vice President of Academic Affairs and Student Engagement (VPAASE) at the University of Limerick was offered to Kerstin Mey, she says that she was “hugely excited and eager to start” her UL journey.

“The excitement of joining a young and dynamic research oriented university with a sustained heritage of pioneering higher education programmes and modes of delivery has stayed with me over the past 22 months,” she says.

Since taking up the responsibilities for teaching and learning, the student experience and support, the new institutional Strategic Plan UL@50 was launched.

“It has at its heart a sustained commitment to driving academic excellence, to the transformation of education within the university’s broader civic and civil mission and a holistic approach to internationalisation.”

In addition, Professor Mey asserted that the programmes of study at UL benefit significantly from work-integrated learning.

“The university has played a pioneering role in the development of co-operative education. It currently places more than 2,100 undergraduate students annually with businesses in the region, nationally and internationally. Offering internships as a mandatory element of most Bachelor programmes – the exception are professional body approved programmes that have very specific requirement for work-integrated learning for instance in Allied Health disciplines – is no mean feat. It requires a well-honed system to prepare students, to nurture their independence and strengthen their resilience while taking into account the range and level of competencies, experiences and expectations of a diversifying student community. Such scaled up endeavour has to be rooted in an expansive and sustainable employer network.

“Strong employer relationships are vital too for shaping future facing academic programmes that are relevant for students, their parents and guardians, and employers alike,” she adds.

Professor Mey, a graduate of Humboldt University in her home city of Berlin, argued that “this is particularly important as the occupational landscape and the patterns of employment are changing rapidly and radically under the influence of interconnected developments such as; ubiquitous digitisation, the global flow of capital and information; the exponential growth of knowledge, scientific advances, the proliferation of (disruptive) technologies; demographic dynamics and societal



Picture credit: True Media

challenges like climate change; mass migration; military conflicts; water, food and energy security; public health; human rights.”

“This means that we have to continuously consider together with our students as co-creators of their learning how best to prepare graduates to tackle the profound professional and societal ruptures and shifts of the present and in the future, which include the attacks on the sciences and knowledge from the direction of populism.”

To meet the skills needs of the Irish economy identified by the State, UL has designed Masters in Artificial Intelligence, Data Analytics, Cyber Security, Finance and Machine Learning, amongst others, and through a collaborative effort now delivers a MSc in Digital Health Transformation.

“It creates degree apprenticeships supported by the Government’s Springboard initiative including Executive apprenticeships at Masters level and the first Professional Doctorate in Engineering. >

> UL explores emerging opportunities for flexible learning and continuous professional development through blended and online programmes of study.

“However, it is expensive to create such programmes in ways that maintain a quality social learning experience and high student retention rates. The development of digital learning objects and an engaging online delivery needs adequate Irish State funding.

“It benefits from collaboration of higher education institutions and with industry particularly at a time when universities face growing competition from a range of other education providers amongst them large multinationals which have set up their own academies of learning, as well as from potent online providers such as Udacity. Harnessing technological advances to facilitate learning involves a concerted effort to upskill educators.

“UL increasingly adopts a quintuple helix approach to innovation through which we develop our academic offer, our translational research directed at societal impact and our knowledge exchange and innovation efforts in sustainable ways: with other academic institutions nationally and internationally; with business and industry; with government and with communities.

“For instance, the team of the Research Evidence and Policy Programmes and Practice project, a strategic initiative co-founded by the Department of Children and Youth Affairs (DCYA) and the School of Law, offers an Executive Leadership programme for people in Government and statutory and voluntary organisations with responsibility for addressing complex problems,” she adds.

The integration of community engaged learning and research opportunities for students forms an important dimension of many of the UL education programmes, Professor Mey explains. This is realised through Practicums co-designed and co-delivered with local communities and supported by a partnership with Limerick City and County Council and the HSE; placements of students in schools and health contexts; through targeted inquiry and project work as well as through a multitude of recognised volunteering opportunities for UL students at all levels.

“Working in and with communities contributes to consolidating our successful track record of nurturing aspirations, growing talent and fostering education support and networks to widen access to higher education,” says Kerstin.

In partnership with the Social Entrepreneurship incubator BNest, UL promotes social entrepreneurship and complements its support for commercial start-ups through the Nexus Innovation Centre. The University prototypes and pilots ‘effectual education’ programmes that shape creative and ‘entrepreneurial’ mindsets.

“This marks a shift in emphasis from educating highly employable graduates (job takers) – for which Irish universities have been internationally renowned – towards developing agile and adaptable graduates, who are inquisitive and imaginative; who ‘think big picture’ and critically reflect; who embrace complexity and take risks; who stay current through life-long and accelerated learning; who effectively network and collaborate; who are socially and ethically aware; and

who are thus able to identify ways and means to create new business, social and/or cultural ventures”, Professor Mey says. “Offering our students opportunities to broaden their experiential horizons and cross-cultural competencies, to learn a foreign language and to acquire inter/national work experiences prepares them not only for global employability (in the widest sense) but significantly contributes to their formation as open-minded and engaged citizen. UL has the largest Erasmus+ student and staff mobility programme of any university in Ireland.

“It underpins the university’s endeavours to increase the number of internationally mobile students from currently 35 to 40 per cent of the overall UG student numbers over the next five years. Erasmus+ also enables us to host European students for a semester or a year in addition to Study Abroad participants and the growing number of international students who study full-time at UL. Increasing international student recruitment promotes the global visibility of UL and contributes to the internationalisation of the student and staff experience ‘at home’. This happens not automatically, but takes proactive educational, cultural and pastoral support to facilitate a high quality student experience for all,” she adds.

Warning that it cannot be ignored, Professor Mey stated “that international student recruitment has become essential for the sustainability of the university in light of the persistent underfunding of Irish higher education.

“Global demand for increased mobility of talent and labour also impacts the climate. Therefore fostering inclusive experiential learning across geographies and cultures and catalysing international collaboration in knowledge making and application calls for smarter mobility solutions by exploring and exploiting advanced ICTs. UL’s Arts and Humanities programmes currently test innovative approaches to student mobility. As for all innovations in pedagogies and learning technologies, it involves dedicated staff development.”

Looking at the Irish and indeed the global education landscapes, it is quite clear for Professor Mey, “that more radical changes to the (higher) education eco-system are posed from a number of directions including the proliferation of knowledge deliverers and the evolution of new learning models and modes; in terms of resourcing, governance and quality management, as well as regarding the refocusing on learners and learning outcomes.

“A shift from front-loaded mass education to flexible, personalised and lifelong learning approaches and respective flexible accreditation and regulatory frameworks is necessary to propel competency-based learning and continuous re- and upskilling that keeps up with the speed and profundity of changes to occupations and employment, to knowledge and services, to individual and collective experiences and expectations, which are marked by digital (self)management, automation, big data, virtual and augmented reality, social media etc.

To that end, “the University of Limerick addresses the profound challenges to higher learning, the world of work and the wider society by transforming its education offer”, Professor Mey concludes.

- Andrew Carey

'THE ALGERIAN FRONTIER' - NEW PHD

A specially designed International PhD at University of Limerick will help transform the way teaching and administration at Algerian universities is carried out. The ground-breaking initiative by the Algerian Government to use English as the official language of teaching and learning at the country's universities will be supported through the specially designed programme offered to the country's visiting students.

Winning a four year contract that is estimated to be worth up to €20million, University of Limerick has agreed to facilitate the conversion to English as a teaching medium with the Ministry of National Education (Algeria) as the country moves to increase the visibility of research in higher education institutions. Previously described as a move "to open up to the international environment" for Algerian universities, a think-tank of specialists and administration officials presented proposals to the Algerian Ministry last year for promoting the use of English in teaching and research.

Dr Mairead Moriarty, Assistant Dean of Arts, Humanities and Social Sciences and Senior Lecturer in Applied Linguistics at University of Limerick, told Links how the new partnership originated.

"The Algerian government are moving from teaching everything through the medium of French to the medium of English so they need to upskill all their Universities staff, their trainee teachers and all of the current students so they have put aside a significant amount of funding to do this," she says. "UL's first engagement with the proposal came about last Summer when Professor Tewfik Soulimane, an Algerian national who is the head of chemical sciences at Bernal Institute, was asked if University of Limerick would like to bid for the contract," she says.

This is a result of a long term collaboration of Professor Soulimane with the University of Tlemcen through the Erasmus+/ICM.

From there, Mairead joined a UL delegation, led by Tewfik, along with Puneet Saidha, Ann Ledwith and David Tanner, who travelled to Algeria last November to pitch for the project. "While we were there we had consultations and presentations to document all of the aspects of our bid to host the candidates, including how the programme would look, the types of supports available for international students and how competitive UL was against other Irish and UK universities," says Mairead.

"Our job now is to bring students, who have competed nationally in Algeria for these scholarships, over to us so that they can be trained on how to teach through the medium of English while also doing a PhD at the same time."

Professor Soulimane says he was "delighted to see this major engagement between my country of origin and University of Limerick adding that he was looking forward to the positive impact for students.

"They will be undertaking world class research while developing their language skills and cultural knowledge in



the outstanding and welcoming campus that we have here in Limerick," he explains.

The project team in UL created an international PhD with a taught component of English as a medium of instruction after which candidates will embark on three years of individual research resulting in a PhD upon completion.

"Essentially they made a national decision that they wanted to divorce themselves from the use of the French language in an educational setting because publishing their research and continuing to educate people through the medium of French keeps them out of international university rankings and therefore that really damages their reputation," says Mairead. Mairead says that it was explained to the UL delegation during their visit to Algeria that universities there were having difficulty accessing funding and attracting international collaborators outside of the French speaking world.

"We were told that they needed to start the switch and publish in English and to ensure that their education system is moved over to English quickly," she says.

"Algeria is doing this on two levels – in third level education and in primary schools and then they will expand it in time," Mairead told UL Links.

"The first phase of the project saw 117 PhD students, the majority of which are female, join the international PhD programme at the start of 2020 and in September and next January we envisage taking on more students across more disciplines in the University."

At each intake, students will join a structured four year programme with a taught cycle on English language proficiency and the pedagogy (training to teach) of their subject through English.

At the end of the first year, the students, who have all completed BAs and MAs at Algerian Universities, can opt to exit the UL programme with a certificate in English as a medium of instruction or they can go on to complete the international PhD through a three year research programme. >

Pictured (Left):
Dr Mairead Moriarty
and Professor Tewfik
Soulimane

Picture credit: Brian Arthur
Pictured (Right, L-R):
Professor David Tanner,
Professor Puneet Saidha,
Dr Ann Ledwith, Mr
Arezki Saidani Algerian
Director of Higher
Education and Scientific
Research, Professor
Tewfik Soulimane,
Dr Mairead Moriarty
and Dr Tayeb Bouzid
Algerian Minister of
Higher Education and
Scientific Research



> "Overall the programme will see 400 Algerian PhD students study at UL during the four years of the project in a contract estimated to be worth up to €20million," says Mairead.

"As part of the initiative, a full support network, including on-campus accommodation, has been put in place to help the international students while they are at UL,"

A Memorandum of Understanding (MoU) between UL and the Algerian Ministry of Education has been signed agreeing to the relationship and the fee structure over the first four years of the project, as well as a contract guaranteeing €5.5million for University of Limerick on the initial intake.

Mr Arezki Saidani, Director of Cooperation and Interuniversity exchanges at the Algerian Ministry of Education, said: "We are delighted to have signed and sealed the agreement and we look forward to a long-term engagement and fruitful collaboration with the University of Limerick."

Dean of Arts, Humanities and Social studies, Helen Kelly Holmes, says: "This initiative is a game changer in terms of our international presence and impact.

"It builds on our strong reputation in the field of English as a Second Language, which is continually growing and innovating.

"We have much to learn from the cooperation with Algeria and it is a fantastic opportunity to help shape the future development of higher education in that country," she adds.

Mairead explains that the project must be put in context in terms of the Algerian economy to fully understand it.

"It is a very wealthy country in terms of resources such as gas, oil and diamonds, but it doesn't have the industry to support that. There is huge unemployment and the State basically provides everything in terms of housing, provisions and supports," she explains.

"For this particular cohort, they would be unemployed and with limited opportunities to further their education if they didn't continue with their studies and given the fact that they have all competed to be on this scholarship programme, we are very confident that the vast majority of the students will see

it through to the end.

"This is hugely important for Algeria because the price is too high for them not to complete the programme especially in terms of future prospects," she adds.

Mairead explains on completion of the international PhD, each of the Algerian students are well placed to access a lecturing post when they return home.

"From a diversity point of view, a large portion of the cohort are females, and that is a good thing," Mairead said adding that "it's females from a developing country which is in line with their Government policy to upskill women since gaining their independence from France in 1962".

While French is still used in certain educational settings such as medicine, Mairead added that the universities wish to make "a bold statement to get what they need from international markets".

In a broader context, Mairead cites UL's focus on the "global south as a real area of opportunity, as the emerging markets in Africa will prove to be worthwhile.

"We also have a moral responsibility to the developing world and to developing countries to reach their goals. I think the fact that we are a University of Sanctuary and the fact that we have a huge amount of projects with Irish Aid and a history of doing research that is community led is important.

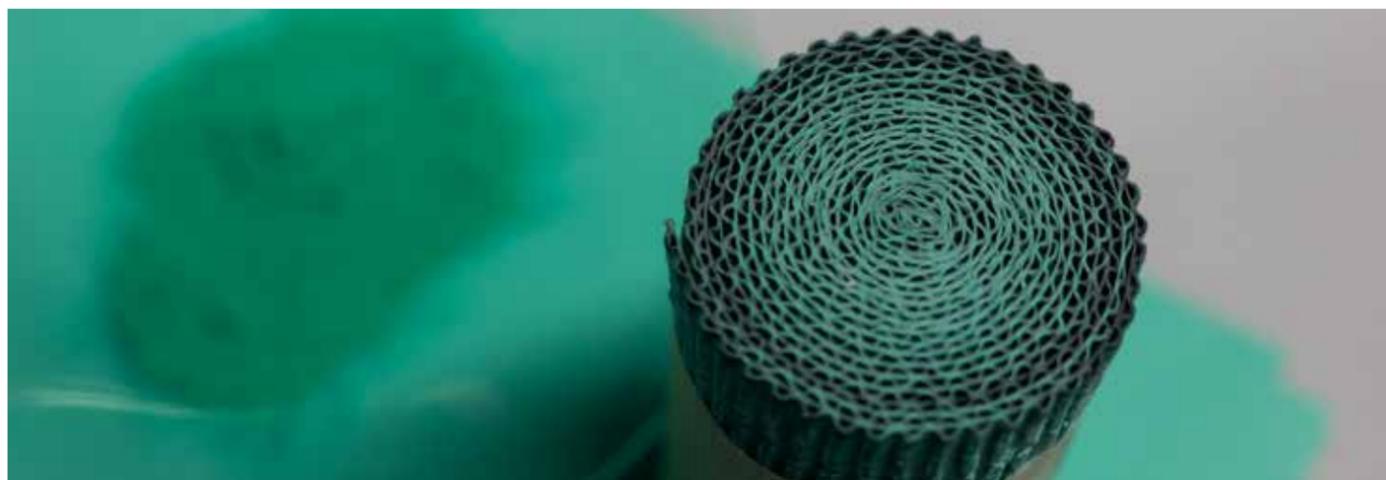
"That type of work can't just be in our own local community because if you really want to be an international player, you can't just focus on what is happening in your own front yard. "This type of contract impacts on a number of separate levels. It impacts on the individuals and their professional development as they become the train the trainers. It also has an economic impact in the sense that these students return highly trained and highly skilled meaning that their own universities will go up the rankings, so you bring them in line with the Global North.

"Also remember that the majority of the students are female and if you are putting women in that role of train the trainer, where society is traditionally male dominated, that is a really strong statement made by Government," she adds.

- Andrew Carey

WHY CRYSTALS WILL SAVE THE WORLD

UL researchers have made major discoveries to affect global energy consumption. Professor Michael Zaworotko, Bernal Chair of Crystal Engineering, talks about the 'secret sauce'



It started with a dream 30 years ago. The dream was of crystal engineering, that material science would become like architecture and allow intervention in nature to design new materials.

Professor Michael Zaworotko is standing in a lab at the Bernal Institute at University of Limerick. He is holding a jar of powdered green material in one hand and a thinly rolled stack of green paper in another.

"This," he smiles, indicating to the green powder, "is the secret sauce".

"And this," he nods at the wrap of paper, "is the end product". This unassuming scientist, 'Mike Z', is discussing how he and his team at the Bernal have made major discoveries to affect global energy consumption. The discovery of a revolutionary new material could help solve the global water crisis by producing water from air, even in the most remote of locations. The dream, made reality.

Prof Zaworotko's lab has developed a crystalline material after decades of research that has favourable properties for absorbing and releasing water from the atmosphere that could revolutionise dehumidification systems in buildings and the availability of water in regions of drought.

The green material is ROS-037 and it has been developed as a commercially viable nanomaterial by Molecule RND LTD, an international think tank, research group and incubator fund that has located in UL to work in collaboration with Prof Zaworotko and his team.

The idea is that the water capture material – a low energy desiccant – would replace the silica traditionally used in

dehumidification systems in buildings.

It could also be used to "wick water from the air", with potentially incredible ramifications for arid, water starved regions. The end product that can be installed in existing dehumidifiers is the wrap of paper Zaworotko holds in his other hand.

"The potential is that it's one of the biggest inventions in history," says Prof Zaworotko with the air of someone not given lightly to exaggeration.

"Clean water at will is something that is game changing. It is even more tangible to many people's everyday lives. The beauty is there is a market, there is an urgent need here that is not being filled by the current technologies.

"But it goes further than this, it goes to cleaning up agriculture, producing medical grade water in hospitals – it has a huge variety of potential applications," he adds.

The application of this new material is not limited to water. Prof Zaworotko, along with Kai-Jie Chen, Amrit Kumar, David G. Madden and Soumya Mukherjee, recently wrote a paper for the highly prestigious journal Science about the energy efficient purification of ethylene. Another dream on its way to becoming reality.

Mike Zaworotko is the Bernal Chair of Crystal Engineering and Science Foundation of Ireland Research Professor and co-director of the Synthesis and Solid-State Pharmaceutical Centre, to give him his full title, and a rock star of the research world.

>



“

It is all about the recycling – it is not the capture, it is the combined capture and release cycle. If you get the right sweet spot, then you dramatically change everything. The economics, the energetics – everything just changes

- Professor Mike Zaworotko

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Picture credits:
Alan Place

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Being without water is something that is affecting billions of people already. There is no Plan B for water.

- Professor Mike Zaworotko

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Picture credit: Alan Place



➤ He was recently named among the world's most influential researchers by the Web of Science group and in April of last year was awarded almost €1m in ground-breaking research funding to study a new class of materials aimed at solving global challenges related to commodity purification.

In October, he was admitted to the Royal Irish Academy, considered the highest academic honour in Ireland.

Today, he is keen to tell the "story of the long journey of how we started with a dream 30 years ago and ended up today with something much more than pretty structures and papers – which is properties that are relevant to real world applications.

"The dream was that material science would become like architecture. That we could be like architects and make materials by design, that a chemist could create a material with the right structure and the right properties – as opposed to nature being what it is, that a person could intervene and design new classes of materials.

"The dream is a lot older than the early 1990s, that is just when I started my involvement in the area.

"What it boils down to – it is all about energy. How much energy does it cost – because that is the real cost of everything.

"How much energy do you have to spend to produce and purify ethylene? How much energy do you have to spend to produce water? They can all be done, but they cost a lot of energy. And so desiccants are everywhere; water capture is easy. You can dry things up, but dehumidifiers use a lot of energy.

"It is all about the recycling – it is not the capture, it is the combined capture and release cycle. If you get the right sweet spot, then you dramatically change everything. The economics, the energetics – everything just changes."

Molecule have companies and countries queuing up to test and apply the commercialisation of the material, all of the research for which was carried out at the Bernal Institute, where Mike and his team of 20-plus researchers are based.

"Well, the easiest part of the story – in one sentence, what the application is and how it will affect the world: We will make clean water available to anybody in the world, by pressing a button, with very low energy footprint. That is only one application – that is the most exciting, valuable thing you could do, I think, right now, the lowest lying fruit," explains Prof Zaworotko.

"Being without water is something that is affecting billions of people already. There is no Plan B for water," he adds.

The next step, the Bernal researcher says, has massive potential implications for climate change.

"CO2 is another goal, but it is not so tangible. Things are getting worse in terms of CO2 levels, but it doesn't have an immediate effect – it might be 50 years before the tip over point happens, which people are talking about, when it will be almost irreversible," Mike explains.

"CO2 is, I would say, the second lowest lying fruit. And it is a very juicy one too, because there are immediate industrial applications – but there is also competing technology. So it can be done. You can't make pure water in the desert at the moment, but you can capture CO2 in industrial processes – but it is energy intensive.

"If we can cut that cost, and we are not talking one or two percent, we are talking 50-90% reduction in the energy footprint – that will then have an effect on CO2 emissions and the global CO2 level.

"We are going after CO2," he adds, smiling at the prospect of another dream that is about to be realised.

- Alan Owens



Pictured: Professor Mike Zaworotko and his team outside The Bernal Institute

AN OLYMPIAN IN WAITING

AT just 20, Ciara Neville has the world at her feet, literally, for this rising athletics star has goals and ambitions that will take her to international stages and beyond

Sitting in Eden for a 10am coffee one morning, Ciara Neville has already been to a yoga session and track training as everyone else's day was just kicking off.

When you are on the cusp of success in professional sport, commitment is what it is all about.

Ciara Neville is committed.

"I have missed birthday parties and big celebrations with my friends – going out at the weekend and things like that, but I don't look at it as anything else other than an investment in my future. I want to be a fulltime athlete at the end of this and there is only one way to do that. You have to go all in.

"I have been training in UL since I was six or seven years old and it is all I ever wanted to do.

"To be honest, I just went down to UL with my friend's mom one day and we were messing about trying to keep up with the older ones and it ended up that I joined Emerald AC and I have been there ever since," she adds.

Even her CAO applications were focused on going to UL and to stay on the track that she has known since she was child.

"I didn't want to leave home and I didn't want to leave the track or my coach so I pretty much put my focus on staying here so that I could take my sports career to the next level."

Ciara's lectures, as she says, "are just 300m away from where I live on campus and the track is literally outside my door. And when mom misses me from home, she drops over some cooked dinners."

Specialising in 100m and 200m, Ciara also runs 60m indoor, but there is a top 56 ranking goal for the sprinter from Monaleen – and with it, a place at the Tokyo Olympics this summer. That's where she wants to take it to the next level.

Studying Sports and Exercise Science, Ciara has spent two years at UL perfecting her ability to run fast, to study and to be an Olympian in waiting.

Dedication, commitment and regime are just some of the things that go with being a professional athlete, and Ciara is living that life in preparation.

3,000 calories daily, six track sessions per week, evening workshops, two yoga and two gym sessions all make up the routine for the athlete – but she doesn't see it as a sacrifice.

"I live in an athlete's house on campus and it is great to have access to all these facilities. It has really made the difference and getting a scholarship really helped.

"Living with likeminded people is a bonus as we all keep ourselves on the straight and narrow.

>

> "We also partake in the workshops that are provided – three or four each semester - and that gives me an insight into things like psychology and nutrition."

All of this goes hand in hand with her track training, which varies depending on the time of year.

Winter training is all about fitness with longer distances covered while spring training is more geared towards competition.

And competition is where Ciara is set to soar as a rising star.

Qualification for the World Indoor finals in China is the short term goal and leading at the National Championships will secure that for Ciara, but the long term goal is to go back to the Far East for the Olympics this Summer.

"I qualified for the World Championships two years ago and the times are the same over 60m. That's also my personal best so if I can equal that or get a new PB I'll hopefully be on the plane," she says.

In 2018, athletes began their quest to qualify for the Olympics and Ciara has until the end of June to run 100m in 11.15secs or get herself into the top 56 ranked female athletes.

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I qualified for the World championships two years ago and the times are the same over 60m. That's also my personal best so if I can equal that or get a new PB I'll hopefully be on the plane.

- Ciara Neville

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As the country's number one ranked sprinter, Ciara wants to achieve both Olympic qualification standards and really make a claim for herself.

"There is no point in going if you can't run the time," she says.

As an Olympian in waiting, Ciara links her continued success to her being at UL.

"I have been walking around this campus since I was a child and I know where everything is. That alone gives me the ability to focus on everything that I need to do and that is probably the best thing about being here," says the runner.

"It's a year-round commitment as we race from January to March and then we are straight back in to training before we go back racing from May to August."

Three weeks off before heading back to college and it all starts again.

But Ciara says that she wouldn't change it for the world.

- Andrew Carey

Picture credits:
Sportsfile



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I live in an athlete's house on campus and it is great to have access to all these facilities. It has really made the difference and getting a scholarship really helped...Living with likeminded people is a bonus as we all keep ourselves on the straight and narrow

- Ciara Neville

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THE GRADUATE INSPIRING AND MOTIVATING YOUNG PEOPLE

Profile: Dr Helen Raftery CEO of Junior Achievement Ireland

Junior Achievement Ireland (JAI) works with business leaders, students, teachers, and other educationalists across 160 supporting organisations to deliver JA programmes to more than 63,000 pupils in primary and second levels across Ireland.

Helen Raftery is CEO of Junior Achievement Ireland (JAI), working with 30 staff and 3,000 business volunteers each year to inspire and motivate young people to realise their potential by valuing education and gaining an understanding of how to succeed in the world of work.

Above all, she is a UL graduate of the class of '91 where she gained her degree in English, education and physical education.

Before assuming her current role, Helen enjoyed opportunities to teach and to work across the public, private and voluntary sectors, including roles in two National Governing Bodies of Sport, and at the Irish Sports Council, in the eight years spanning its emergence from voluntary committee to statutory agency.

Her doctoral studies focussed on the work of volunteer directors/ board members in non-profits, with a particular emphasis on the governance of sport and the role of voluntary leaders in non-profit organisations.

A native of Corofin, Co Galway, Helen gained her primary degree in English, Education and Physical Education at the University of Limerick in 1991 and pursued further postgraduate qualifications, comprising an MA in European Public Policy (1992), supported through Erasmus across four different institutions around Europe, and later an MSc (Management) at Trinity College, Dublin (2003).

Three years at the 'chalkface' in Holy Rosary College, Mountbellew, Co. Galway was followed by two years in the National Governing Body (NGB) for basketball – each of which were exciting and challenging roles. The chance to get involved in the work of the emerging Irish Sports Council (ISC) however was an opportunity not to be missed.

Working from early 1997 in the Department of Education with John Treacy, then Executive Chairman of the emerging Irish Sports Council (ISC), meant a 'box seat' to see hugely important governmental-level developments in sport emerge: from the appointment of the first Minister of Sport (1997), to the signing into law of the Irish Sports Council Act (1999) establishing ISC as a statutory agency.

In the subsequent years, Helen contributed to the organisation's growth from a start-up with four staff and a budget of circa €10million to 28 staff and circa €50million



Picture credit:
Brian Gavin Press 22

in 2005, incorporating direct involvement in the initiation of ISC-led initiatives like the Local Sports Partnerships (2002) to coordinate efforts to promote participation and the Irish Institute of Sport (2004) to support the building and maintenance of high performance systems for elite athletes.

After moving to the Football Association of Ireland (FAI) in 2005 to oversee the merger of the Association and the National League, other once-in-a-generation opportunities included being involved at various stages in the work to design, build and fund the new stadium (AVIVA Stadium) and leading the IT-enabled change project to systemise football administration in support of the thousands of volunteers, coaches and officials who promote sport at club, local, county and regional level all over the country.

Challenging herself to gain more diverse experience outside of the public service and the sports industry while completing her doctoral work at Queens University Belfast, Helen worked as a management consultant for a number of years, specialising in areas such as strategic planning, organisation development and design, change management and governance.

In this period, the opportunity to take up teaching hours at University College Dublin evolved to leading the governance and law module within the MSc Sports Management postgraduate programme, which she continues to enjoy. >

STAND OUT FIGURES FROM 2018/19 JUNIOR ACHIEVEMENT IRELAND ENGAGED:

63,138 - STUDENTS



571 - SCHOOLS



178 - ORGANISATIONS



3,144 - VOLUNTEERS FROM THE WORLD OF WORK



> Joining Junior Achievement (JAI) following the retirement of its founding director in 2012 was a fantastic opportunity to combine Helen's experience and expertise in senior management of non-profit organisations with her long-held belief in the power of education and the merits of providing opportunities for young people to excel. Her clarion call remains the need to ensure young people get every opportunity to participate, enjoy and excel in the area of their choosing – be it in sport, academic pursuits, or starting their careers in business. That is why she is passionate about the ambitions of JAI in recruiting and training business volunteers to inspire young people to maximise their talents and to stay in school, a mission driven by the combined efforts of the professional staff at JAI and volunteers from a wide range of industries and education partners across Ireland.

- Andrew Carey

BREAST PUMP – AMONGST THE TIME TOP 100 INVENTIONS OF 2019

The journey from a first class honours degree in Product Design and Technology (PDT), to being behind a product to make the front cover of Time Magazine, has been one of excellence for University of Limerick alumnus Jonathan O'Toole.

Graduating in 2010, Jonathan founded 'Fresh Product Designs' as he furthered his education through a PhD at UL – a period he described as "the first time I was interacting and working with people as passionate and excited by great design and intelligent thinking as I was." However Ireland was deep in recession, so a three-year stint at Dyson in the UK and Malaysia set Jonathan up with valued expertise and development ahead of joining Elvie – and it is there that the UL graduate has made his mark.

Since 2014, Jonathan has been part of their success story and a company that "is bringing women's technology out of the dark ages".

Elvie wants "to improve women's lives through smarter technology. We create new products, new solutions and a fair few conversations while we're at it." They say that they are committed to talking candidly about women's bodies in order to give them the products they deserve. One of these breakthrough products has been the development of the world's first silent wearable breast pump – heralded by Time Magazine as amongst the 100 best inventions of 2019.

The product "Elvie Pump makes it possible to pump on your own terms - at home, at work or on-the-go. Ditch the hours spent hidden in cupboards, tethered to a wall or cleaning tubes. With Elvie Pump you can lead the meeting, get outside or simply enjoy some peace and quiet... all while you pump."

Jonathan, as chief product officer and chief operating officer, said that he is immensely proud of the team and their work across their entire suite of products, but it is intelligent design that sparks most with the Elvie COO. Jonathan writes, "through intelligent design we all can create products and experiences that will positively affect not only the user directly but the world indirectly. We need to create honest designs that improve people's lives and therefore deserve to exist in an intelligent world."

- Andrew Carey

See more at elvie.com

BREWING THE PERFECT CUP

Grinding out the maths behind coffee

Few of the billions of coffee drinkers around the world would ever consider the science behind the drink. But researchers at University of Limerick have shown that mathematical models could help to brew the perfect cup of coffee.

And as part of Science Week 2019, UL researchers gathered for an evening of coffee appreciation for those who were 'coffee curious' at an event called the Art and Science of Coffee at The Old Barracks in Birdhill.

Dr Kevin Moroney, a postdoctoral researcher in UL's Department of Mathematics and Statistics (MACSI) and Synthesis and Solid State Pharmaceutical Centre (SSPC) at Bernal in UL, and his colleague, Dr Ken O'Connell, a postdoctoral researcher in the DPTC research centre at Bernal in UL, working with industry partners, have published research in a prominent international journal, that looks at the maths behind brewing coffee.

Dr Moroney, the lead-author on the paper which was published by PLOS ONE, a high quality, peer-reviewed, US-based scientific journal, says that baristas and manufacturers should use the "modelling to target and ensure that you can, as much as possible, repeatedly get the quality coffee that you are looking for".

"When people are measuring the quality of coffee brews they measure two things – the strength of the coffee, and that is just the amount of soluble material in the drink – and then they measure the amount of material that has been extracted from the dry coffee.

"The problem with how they measure it is that it is just an average measurement – when they estimate the extraction level, they assume it is uniform across the whole coffee bed. So with this paper, what we are looking at is modelling the flow within the coffee bed to try and capture non-uniform extraction."

The paper shows that a greater understanding of the chemical dissolution and transport processes taking place in a single coffee grain, right up to the complicated fluid dynamics in the coffee bed, will all further assist in the hunt for quality and consistency in speciality coffee brewing.

The goal of the research is to create a mathematical set of equations to predict the quality of brewed coffee, based on the properties of coffee grounds, water used and brewing settings, Dr Moroney says.

This would, in turn, allow coffee manufacturers to develop machines that brew that elusive perfect cup of coffee.

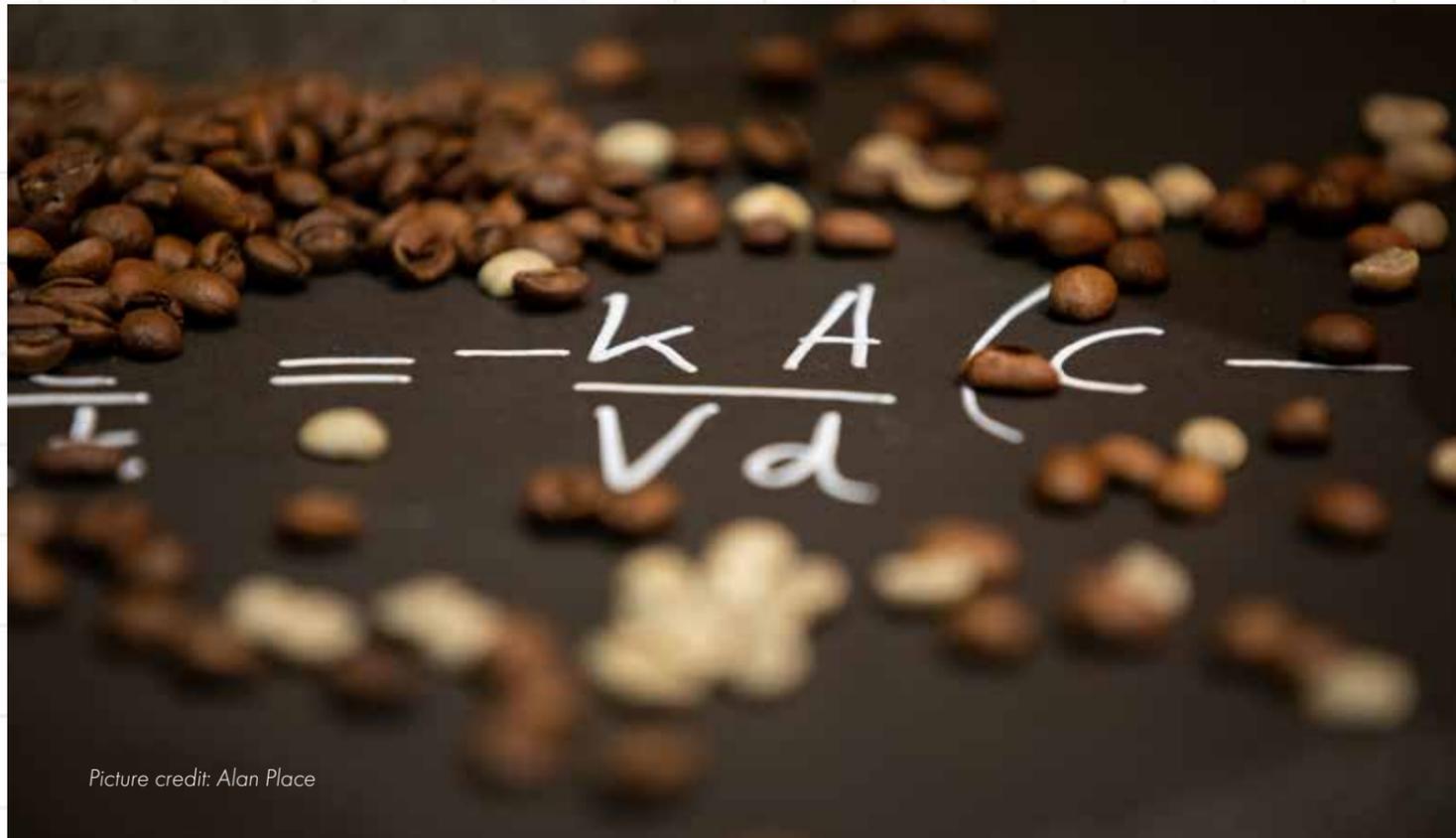
With world coffee consumption steadily increasing, the demand on coffee appliance manufacturers to engineer a precise and reproducible process into their products is ever increasing. >

Coffee is composed of hundreds of different chemicals depending on its origin and roasting methods. About 30 percent roast and ground coffee consists of material soluble during brewing. These chemicals extract at different rates, contributing different flavours to the brew. The initial brew can be strong, acidic and sour. As brewing progresses, sweet and caramel tones become dominant, before finally moving to bitter flavours.



Dr Kevin Moroney at The Old Barracks Coffee House, Birdhill
Next page: Alan Andrews owner of The Old Barracks Coffee House with Dr Kevin Moroney
Picture credits: Alan Place





Picture credit: Alan Place

➤ However, the goal of providing brewers with a guide on how to control quality for variations in conditions, remains elusive.

"If you give the same coffee to ten baristas, you will end up with ten different tasting drinks. Years ago this inconsistency was put down to the "art" of making espresso. These days it is more likely to be attributed to the "science" of making espresso," the researchers write in the PLOS ONE paper.

At the public event in the Old Barracks, which has been open since July 2017 and provides a "unique experience for the coffee curious", Dr Moroney explained that, through the power of mathematics, the researchers can analyse what makes that perfect cup of coffee.

The evening also heard from Sarah Hayes, Associate Director of the UL-based research centre SSPC, who said the research could be applied to a "whole range of fields" in looking at the science behind everyday life.

"What we are trying to show is that the current standards maybe are not the best – and that you need to consider the uniformity of your extraction as well," says Dr Moroney.

"So this modelling might be interesting to baristas, but it would be more interesting to manufacturers, because they can look at their specific design and they can then look at how they alter their design to ensure that their machine is more robust – basically less likely to have non-uniform extraction behaviour. "We are trying to model how you make a cup of coffee and how you can do that better," he added.

- Alan Owens



NEW UNIVERSITY OF LIMERICK FOUNDATION CEO AND UL VICE PRESIDENT DEVELOPMENT APPOINTED



The University of Limerick Foundation has appointed a new CEO, who has also taken up the new role of Vice President Development at UL.

UL President Dr Des Fitzgerald confirmed the appointment of Harvey Duthie to the position of Chief Executive Officer of the UL Foundation and UL Vice President Development. He replaces David Cronin, who has taken up the role as the new president and chief executive of Ireland Funds America.

Mr Duthie spent the last ten years in London working on major global fundraising campaigns. His clients have included the Bill and Melinda Gates Foundation, Oxford University, Africa Centres for Disease Control, UNHCR and Singapore Management University, among others.

From Ballinasloe, Co Galway, he is a finance graduate of Maynooth University.

In the new role as UL Vice President Development, he will shape a plan to support UL's development ambitions, with input from across the University.

Dr Fitzgerald said: "I am delighted to announce that Harvey Duthie has accepted the position of Chief Executive Officer of the UL Foundation and UL Vice President Development.

"Harvey will serve as the senior staff member of the Foundation, providing guidance and support to the Board, the Chair and the President, as well as to University faculty and administrators. Harvey will be responsible for the formulation, development and implementation of the Foundation's fundraising policy and strategy and will have the lead role in the solicitation of gifts.



The University of Limerick Foundation is engaged in fundraising for the University from private individuals, foundations and business. Building on its heritage, UL remains strongly committed to widening access to higher education and supporting talent in entrepreneurship, sports and creativity, across all disciplinary areas. Scholarships, bursaries and awards play a vital role in realising UL's vision and in nurturing the talent and diversification of the student body.

If you are interested in supporting scholarships or bursaries for UL students, please contact: Harvey Duthie, CEO, UL Foundation & UL Vice President Development (email: harvey.duthie@ul.ie) or Sarah Hartnett, Director of Development, UL Foundation (email: sarah.hartnett@ul.ie).

Making a gift* is easy via our secure on-line server: www.ulfoundation.com/ways-to-give/give-online

*100% of your donation will support your chosen beneficiary project with 0% used to fund administrative costs.

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I am excited to be joining the University at such an important moment in its history and playing a part in the ambitious UL@50 development plans.

- Harvey Duthie

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"As a senior executive with demonstrable experience of leading successful capital campaigns and fundraising initiatives with more than 50 clients across the United Kingdom, Ireland, mainland Europe and the United States, Harvey has extensive experience of planning, managing, and implementing programs aimed to achieve fundraising goals and mission impact."

Mr Duthie said: "I am excited to be joining the University at such an important moment in its history and playing a part in the ambitious UL@50 development plans."

IN LIMBO TAKES A JOURNEY THROUGH MUSIC & DANCE

Sitting in between the two worlds of traditional and contemporary, IN LiMBO takes a journey where few have gone within Irish step dancing, but who is the performer behind the dance

Originally from Connecticut, Kristyn Fontanella currently resides in Galway and has spent years ahead of the curve bringing her Irish dance training to bear on her current more contemporary work. She spent years dancing in professional shows, going on to achieve an MA in Contemporary Dance Performance from University of Limerick and becoming an in demand tutor and choreographer whose reputation is quickly growing.

IN LiMBO showcases four live musicians and an ensemble of six dancers who have taken the basics of what makes the tradition so attractive and translated it into a new but still recognizable language of music and dance.

The creative life of an Irish dancer is relatively undeveloped beyond competition and show dancing – Kristyn Fontanella believes that many Irish dancers shy away from questioning the established norms of their dance form. The questions the company has asked and the ideas they explore through this piece are vital to the ongoing life and development of traditional Irish dance.

Touring seven Irish venues in 2020, this production, where all dancers and musicians are graduates from the Irish World Academy of Music and Dance at UL, introduces the audience to another possibility within a dance form that they thought they already knew.

Kristyn's dance training in multiple disciplines and background in theatre have served her well on her journey to enrich and inform and inspire.

Having established herself as a leading choreographer in the development of Irish step dance, Kristyn continues to evolve an instantly recognizable style which focuses on exploring her vast knowledge of Irish Step dancing within a contemporary context.

Her mission is to show another side of the complex world of Irish Step dancing to future generations of Irish step dancers.

This is a specialised niche genre in which few artists are

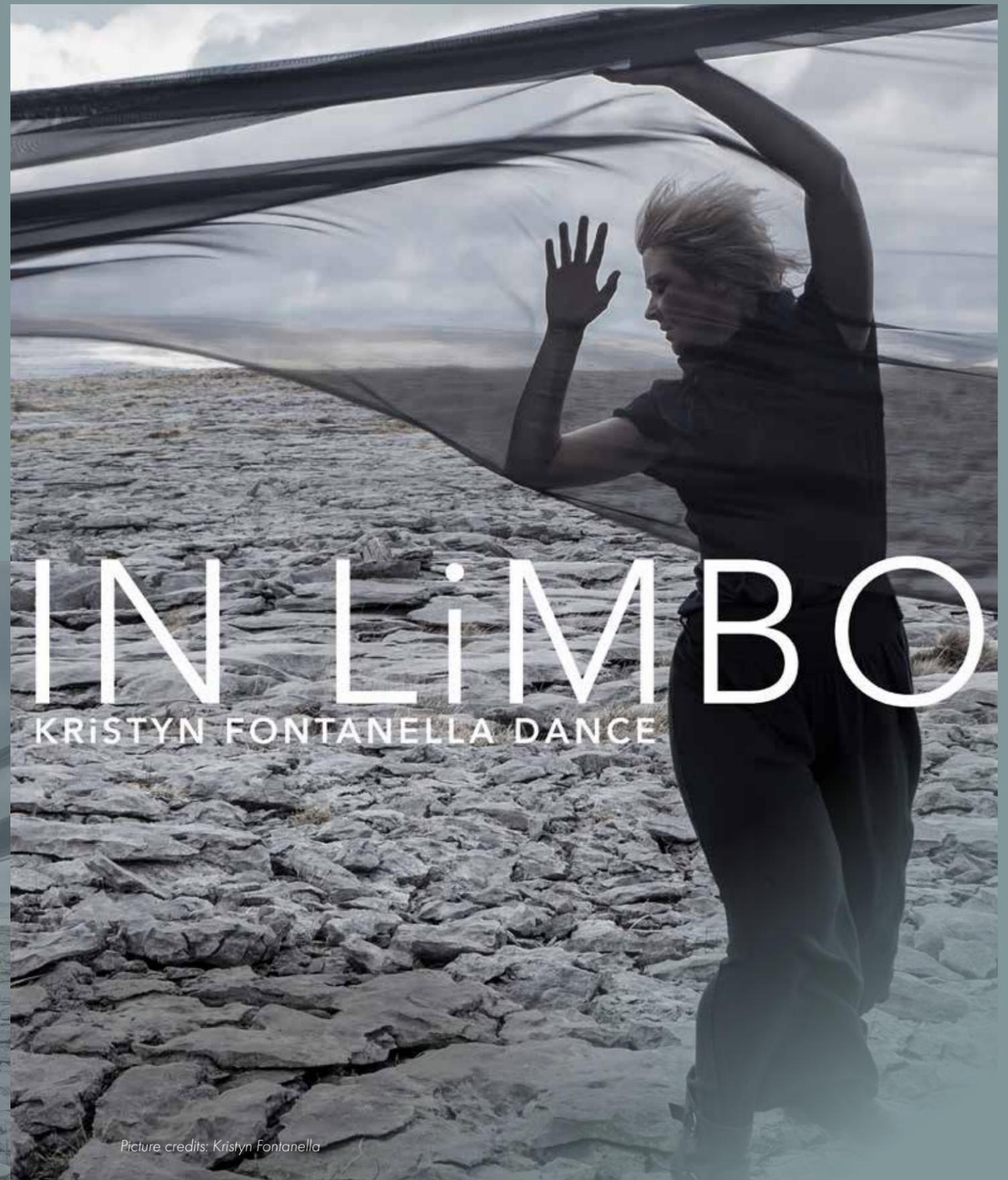
IN LiMBO seeks to answer the question 'What is Irish Dance?' and Kristyn Fontanella Dance presents a compelling answer in their engaging performance that sits perfectly between moods and genres.

- Review from Laura Cummings, Limerick Fringe

working currently and Kristyn wants her work to be a new way of thinking about Irish Step dancing and for the audience to find the familiar of the old within the new.

Some of Kristyn's credits include her being the recipient of Dance Ireland's Mentored Residency in Traditional Dance with Colin Dunne in 2014 and she was the 2015 Traditional Bursary recipient from the Arts Council for her current piece IN LiMBO. IN LiMBO has received support from the Irish Arts Council through multiple awards (Bursary Award, Project Award and Touring Award). Further support from Dance Limerick, Irish World Academy of Music and Dance at University of Limerick, Galway Dance Project, Backstage Theatre, Roscommon Arts Centre and Galway County Council.

- Andrew Carey



Picture credits: Kristyn Fontanella

INTERNATIONAL STUDENTS @ UNIVERSITY OF LIMERICK

With 107 countries represented in the University of Limerick student body during the last academic year, the campus community and student experience is enriched by preserving, respecting, and encouraging cultural diversity. This proud tradition of welcome and inclusion is reflected in the 3,043 international students who visited, studied and lived on campus during the 2018/19 academic year. 1,768 of this cohort were degree-seeking learners with the remainder as visiting students through the Erasmus, non-EU Exchange, or the Study Abroad programmes. The world map overview below shows the representations from all corners of the world of those who come to savour the UL experience. University of Limerick is also home to many more international researchers as well as EU full-time undergraduate and postgraduate students outside of this 3,000 strong cohort, therefore adding to and enhancing the diversity of our multicultural community that we are so proud of in UL. Here are a few of our international student stories about why they chose to study at University of Limerick:

North America
741 Students



Tanit Lanie Lopez, Mexico, Master of Science in Nursing Studies

"Being a nurse has given me the opportunity to travel around the world and experience different healthcare settings and a change in the perception of care.

"Studying at UL in Ireland provides me with the chance to not only immerse in the Irish culture and its healthcare, but also to connect with students from all over the world. Connecting with other people at an international university is beginning to open up my world to even more faraway places and cultures than I could ever have imagined. Having the chance to exchange experiences and perspectives with people from different nationalities is the inspiration we all need to advance in our professions as individuals and as a whole.

"Deciding to study abroad was by far one of the hardest and most exciting adventures of my life, a life changing experience that is making me grow not only as a nurse, but also as a person."

Central America
6 Students

South America
21 Students



Europe 691
Students

Africa
103
Students

Middle East
50
Students

Other Regions
23
Students

Asia
384
Students

Sinenhlanhla Bengu, South Africa, MA Peace & Development Studies

"Born and raised in a small village in Kwa-Zulu Natal, East of South Africa, I had spent my entire childhood in one area. Being born poor in South Africa post 1994 is something I can only describe as a systematically generated existential crisis. Systematic because despite the lack of consensus on the causes of poverty, what we should all agree on is that it is a systematic issue rather than an individual defect. My lived experience and frustrations inspired me to apply for a Masters in Peace and Development at UL through the assistance of the Irish Aid scholarship.

"When I arrived at UL, I was very excited as I had chosen UL due to its well-rounded Masters program and was truly taken by surprise by the beauty of the campus. From the River Shannon, to the peaceful walking trails, to waking up to cows just outside my residence window. The sun sometimes disappears for longer than expected in Ireland, but when it returns Limerick definitely comes alive. And during those days I have made it a tradition to go outside and enjoy the buzz. I have bumped into families walking, the elderly power-walking and the cute friendly dogs. UL is a community campus just as education is a collective good. That is one thing I have enjoyed about studying here, feeling like a community member.

"Besides the Limerick community, there is also the global community, with international students from all over the world. I have danced my hips off at the Diwali celebration, laughed with students from Spain and the Czech Republic, I had numerous suppers with friends from Uganda and China and had a beautiful Christmas dinner with students from Nigeria. I have taken many walks with my friends from Palestine and South Africa and debated development issues with students from America, Netherlands and France. Coming here, I was nervous about figuring it all out alone and I have just been humbled by the support offered by the hard-working souls at the international office and the extended community."



Man Yee, Malaysia, MA of International Tourism

Man Yee came from Malaysia and is currently studying on the MA International Tourism programme at UL. "I chose UL as I wanted to learn about the tourism industry in Ireland, a country that had been on my mind since my time as an undergraduate." Man says that she is particularly impressed by the module content of the programme as it is specifically aimed towards tourism as a whole instead of solely focusing on the hospitality sector alone. "The location, accessibility and size of the UL campus were positive aspects for Man in opting to come to Limerick. "International students in, UL especially postgraduate students, are quite diverse which allows me to meet different people from around the world and understand more about the world in addition to Irish culture."



A MUSICAL JOURNEY:

From summers in India, to growing up in St Louis Zohra Coday's love of Irish music spans continents

Often more famed for its barbeque and blues music, St Louis in the US might not be the first place you would think of for a traditional Irish music concertina player to flourish, but Zohra Coday, whose mother hails from India, has dispelled any doubts that traditional Irish reels are nothing but international.

As one of a large number of international students studying for an MA in Irish Traditional Music Performance course at UL, Zohra tells UL Links of how her links to trad date back to her childhood.

Having lived her whole life in St Louis Missouri, Zohra was first introduced to Irish music and dancing in preschool.

"Every St Patrick's Day a local music and dance school would come and perform. Most of the children performing were graduates of the preschool themselves. Although, I wanted to start learning Irish music and dance at around four or five years old, I was not able to due to my mom working long hours at her job. The music and dance school had summer workshops but with my mom being from India, we would go visit my family every summer," she explains.

"In the summer of third grade, when I was about nine years old, we went to India in March, which meant that we would not go in the summer. That was the first summer I had ever spent in St Louis so I was able to do several different extracurricular activities that I normally could not do during the summer, such as learning South Indian classical dancing, clarinet, Irish music and dancing and continuing to learn violin.

"That summer was the beginning of my love for especially Irish music, but also dancing as well. My mom and the founder of the music and dance school, Helen Gannon, had worked together when my mom first came to the US in the 1980s and that is how I went to my music and dance school. The first day I walked into St Louis Irish Arts (SLIA), I remember feeling really small in the big long hallway of the building that used to be an old school, but was an extension of the church across the parking lot. There were benches lining the hallway and pictures framed from years of class photos above the benches. Halfway down the hallway there was a classroom on the left that I heard dance music coming from and a teacher giving students instructions.

"The music wafted down the hallway as I went into the locker room crowded with girls my age talking to their friends and getting ready for class. As the summer progressed I started to make friends and learn about the different types of Irish music and beginner steps of Irish dancing. By the end of the summer, I was ready to start the fall school year at SLIA and as the next



couple years progressed the extracurriculars, besides playing clarinet and violin in the school bands, I slowly drifted away and Irish dancing and music became my sole interest.

"When I started at SLIA I started on the tin whistle and about a year later, in fourth grade, I started playing the fiddle. During these years, however, I started to develop scoliosis, which is a curvature of the spine that if not treated has to be fixed with surgery. By the time I was 12 and in the sixth grade, my curvature had progressed to 95degs and I needed to have spinal fusion surgery to stop the scoliosis from getting progressively worse than it already was. When I was told I needed to have surgery I was also told that I could not play the fiddle anymore due to the impact that it would have on my posture, which was slowly but continuously deteriorating. As a result, I had to pick another instrument.

"I was not excited to switch to another instrument because I really liked playing the fiddle. But one day after class I sat down with Mrs Gannon and my mom to decide what instrument to choose. I chose every instrument other than the concertina, and at that time, I had not even paid attention to anyone playing it at my music and dance school. However, the concertina was seen as the only instrument that had an equal amount of playing on each side of the instrument and because it was tiny, it would not be an issue for my back.

"I had a trial concertina lesson where I learned half of an intermediate reel. After that initial lesson I was hooked on the concertina and excited to learn new tunes.

"I did not know it at that age, but switching to the concertina was one of the best decisions that I had to make. I was so interested in the concertina that I would practice every day. >

> "That dedication that I found while learning the concertina helped me get up to the standard needed to compete within Groupai Cheoil competitions at the Fleadh Cheoil in the US and in Ireland as well. As I grew up, I continued to compete in solo concertina competitions at SLIA's annual Feiseanna competition and the Midwest Fleadh Cheoil. I also came to Ireland a couple times to compete at the All-Ireland Fleadh Cheoil.

"Besides competing, I started teaching lessons around the age of 15 and around the same time I stopped dancing competitively to focus on playing more. I started playing music alongside Feis musicians every February at my school's annual Feis, dancing competition. At first it was a way of participating at a Feis even though I was not competitively dancing but by the time I entered college, in 2013, I started to grapple with the idea that I could eventually become a Feis musician and travel to play for Feiseanna.

"In college, I continued to teach lessons and play annually, but I was focused on my college degree. It was not until my third year in college, when I was switching majors from biology to sociology, that I realized I wanted to pursue music after I finished my undergraduate degree.

"In the spring of 2017, after finishing my undergraduate degree, I started researching schools that had an Irish music masters degree.

"I always knew I wanted to do my undergraduate close to home and then go to another area for my masters.

"So, I decided to start looking at schools in Ireland rather than the US I knew if I wanted to develop my musicianship then I needed to come to the 'source' of Irish music.

"I researched a couple schools and finally decided on wanting

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I am really happy that I chose UL to further my education and get better at playing the concertina. The environment that is within the Academy allowed me to think in a creative way that I was not used to before coming and I cannot wait for the rest of the year to see what I learn and how much I progress

- Zohra Coday

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to apply to come to the Irish World Academy at University of Limerick. I did a lot of research about the music program and decided that the structure of the music performance degree is what I wanted to have to help develop my skills as an artist and performer. Having the ability to interact and learn from top musicians in my instrument has really been beneficial and all of the staff are always supportive and trying to foster the ambitions of the students.

"I am really happy that I chose UL to further my education and get better at playing the concertina. The environment that is within the Academy allowed me to think in a creative way that I was not used to before coming and I cannot wait for the rest of the year to see what I learn and how much I progress."

- Andrew Carey



Picture credits: Zohra Coday



PLANTING THE SEEDS OF CHANGE

Student Social Entrepreneur Jack O'Connor providing solutions to international third World agricultural problems

Inspired by the movie 'One Dollar A Day', 3rd year International Business Student at UL, Jack O'Connor says that he was struck "to the core" when he began to understand and research the plight of farmers in sub-Saharan Africa.

Born from his studies and creativity was Moyo Nua – a student social enterprise that has won critical acclaim.

Moya Nua takes its name from a combination of the word moyo, meaning life in the Malawian language of Chichewa, and nua, meaning new in Irish Gaelic.

The project is the producer of agricultural seeding planters which utilizes simplified agricultural technologies that are both ergonomic and environmentally friendly for smallholder

farmers - one of the poorest demographics in the world. The need for the seed planter was identified after Jack watched the documentary movie that originated out of a series of viral YouTube videos featuring American college students living in rural Guatemala.

"It nearly struck me to the core and motivated me into action," Jack told UL Links.

He started researching rural agriculture in sub-Saharan Africa, and that led him to Malawi, a country the United Nation calls "one of the most climate-fragile countries in the world." In Malawi, about 80% of the country's food is produced by smallholder farmers, and Jack was moved to design something that could ease the physical demands of farm labor there.

"We were chatting with the farmers about the importance of their children being able to attend school and how this planter, by reducing labor intensity, would allow their kids to start going to school.

"That really hit home with me because I never considered, until I was actually over there, that the reality for some children is that they have to sacrifice education for sustenance."

Jack's volunteering with farmers in Malawi provided him with a number of suggestions for improvement, like making the tool out of locally sourced materials such as bamboo. In total, 18 farmers from Southern Malawi tested the planter. That feedback, along with input from 13 retirees who tested the tool back in Ireland, all helped to inform subsequent iterations of the design.

"We just, honestly, started throwing out ideas and analyzed previous models that existed in the world," added Jack. >

> In addition to the seed planters Moyo Nua is the process of creating educational workshops that will boost the business skills of students in developing countries with the goal of diversifying the sector strength of businesses in countries where agriculture dominates employment.

Jack kept working on the planter, successfully inspiring other students like Catherine Hallinan, to work on progressing the idea and did so through Enactus.

Jack's seed planter won the National pitching competition at Enactus Ireland's national finals and moved to win international fame where he was invited to present the project to UN Deputy Secretary-General Amina Mohammed, MIT Sloan School of Management at Dublin Castle.

The need for and innovativeness of this project is evidenced in its success as the winner of the inaugural 'Peace Through Trade' competition hosted by The World Trade Center's Association Foundation (WTCAF). The winner was announced at The World Trade Center's Association's (WTCA) 50th annual General Assembly (GA) in Querétaro, Mexico.

O'Connor and Hallinan were invited to present onstage at the General Assembly to close to 500 representatives from Member World Trade Centers and their local companies.

The Peace through Trade competition aims to identify and inspire the next generation of entrepreneurial leaders in World Trade Center (WTC) cities. Teams were asked to present original projects, products or other innovative ideas that exemplify and promote social innovation and sustainability through collaboration, fair trade, and ethical international business practices.

"With Moyo Nua, Jack and Catherine have created a project that is equal parts practical, idealist and inspiring," said WTCAF Executive Director, Andrea Garwood, also Executive Director of WTC Trieste. "The selection committee was immediately taken with the submission and we are immensely proud to name Moyo Nua as the first winner of the 'Peace Through Trade' competition."

"Through innovation, a steadfast commitment to sustainability, and hard work, the Moya Nua team has created a successful business that is changing the world for the better," said Rani Dabrai, Director of WTC Dublin.

“These bright young minds represent the future of business, one that is global in vision and sustainable in practice, and we congratulate them both on this well-deserved honor

- Rani Dabrai, Director of WTC Dublin

Picture credits: Jack O'Connor



"These bright young minds represent the future of business, one that is global in vision and sustainable in practice, and we congratulate them both on this well-deserved honor."

Having an article published in Forbes for the project was the icing on top for that academic year for the UL 3rd year student and further internationalizing the success for the social entrepreneur.

Most recently, Jack was then chosen as Ireland United Nations Youth Delegate Team forming part of Ireland's official delegation to the United Nations General Assembly. The aim of the public diplomacy initiative is to provide a platform for young people from Ireland to be represented at the United Nations, and to facilitate greater engagement with Irish youth on national and foreign policy issues.

During the course of this unique opportunity, Jack spent a number of weeks at the UN General Assembly in September, and represented the nation through various events, speeches, discussions and negotiations. >



Picture credit: Jack O'Connor
Illustrations: Kerry Betts

Jack says his aim in life is to experience a journey “where I go beyond business and career, and truly make a widespread and deep impact on the world. Having the exposure to so many varied outlooks and perspectives through my experiences have been instrumental in providing me with quite a good grounding in my professional endeavours, and an added sense of realism into the intricacies and diligence required to create sustainable impact in an ever-changing global environment.”

The young entrepreneur noted the struggles but took them as building blocks to learn from.

“I really struggled with managing setbacks and disappointments. I can largely attribute that to my sense of naivety, lack of experience, and the fact that I had only just left the school environment where I needed permission to simply use the restroom.

“Over time, I feel like my journey has brought a sense of both grounding and calm into how I approach every opportunity and issue, and my general outlook towards life in general. Managing stress and enjoying the processes and setbacks have allowed for more pragmatic progress to occur, as well as a lot more enjoyment experienced during it.

“With the amazing experience that I am gaining during this gap year, it is such a welcome reassurance to have somewhere like the University of Limerick supporting me; and despite the enjoyment right now, I am certainly excited to return to finish my undergraduate studies with UL. I have gained mentors, working colleagues, and friends from both faculty and students here in UL, and I am proud to be a member of this community,” Jack concluded.

- Andrew Carey



ORIGIN PROJECT DELIVERS PERSONALISED CANCER TREATMENTS THROUGH DIAGNOSTIC TARGETED THERAPIES

A new project led by researchers at University of Limerick has the potential to dramatically reduce the risk of error in the treatment of prostate and gynaecological cancer

O rigin aims to deliver more effective, photonics-enabled, brachytherapy cancer treatment through advanced real-time radiation dose imaging and source localisation.

A new optical fibre based sensor system to support diagnostics-driven therapy through enhanced adaptive brachytherapy will be developed through the project, of which University of Limerick is the coordinating organisation.

It brings together leaders from academia and industry to develop a new multi-point optical fibre based dose-monitoring system for both low dose rate and high dose rate brachytherapy, with novel algorithms to provide 3D dose imaging with source localisation capability.

The project has been awarded grant funding of almost €5m from the European Union's Horizon 2020 Research and Innovation Programme, of which UL has received close to €1m.

“The Origin system will be integrated into existing clinical brachytherapy treatment planning and delivery systems to confirm that the dose prescribed to the tumour is achieved, whilst ensuring the dose to organs at risk is within acceptable limits,” explained Dr Sinéad O’Keeffe of UL, who is principal investigator on the project.

Brachytherapy is a form of radiotherapy where radiation is administered internally. It is divided into Low Dose Rate (LDR), where the radioactive sources, known as seeds, remain implanted permanently in the patient, and High Dose Rate (HDR), where higher activity radiation sources are temporarily implanted.

Correct placement of the radiation source is vital to ensure adequate radiation to the target area (tumour), while ensuring minimum exposure to nearby critical organs, such as, in the case of prostate and gynaecological cancers, the bladder, urethra and rectal wall.

Optical fibres provide an ideal solution to true in vivo (i.e. internal to the body) volumetric dosimetry due to their small size, flexibility and electrical passiveness.

Optical fibre sensors offer numerous advantages over conventional dosimeters, such as thermo-luminescence detectors and diodes. The most significant feature of an optical fibre dosimeter is that the dose information is transmitted using optical signals as opposed to electrical signals and that these optical signals can be remotely collected. This ensures the utmost safety for the patient and medical staff in conducting in-patient in vivo dosimetry.

The project will progress the development of optical fibre



Pictured:
Dr Sinéad O’Keeffe
Picture credit:
Sean Curtin

“

This will provide for optimised dose-led, patient-oriented, personalised treatment plans leading to improved patient outcomes and prevention of treatment errors, with the potential to reduce the overall risk of treatment error by 55%

- Dr Sinéad O’Keeffe

”

based sensors capable of measuring true in vivo radiation levels during treatment to provide for dose mapping and radiation source localisation capabilities.

The optical fibre radiation dosimeters will be further optimised for improved optical signal collection efficiency, higher signal-to-noise ratio and repeatable high volume fabrication... it will ensure that Origin establishes Europe at the forefront of brachytherapy system development and photonics manufacturing.

The Optical Fibre Dose Imaging for Adaptive Brachytherapy (ORIGIN) project is an initiative of the Photonics Public Private Partnership (www.photonics21.org), and has received funding from the European Union's Horizon 2020 Research and Innovation Programme. - Alan Owens

JAVANESE GAMELAN

The Javanese gamelan is an orchestra of 60-plus musical instruments - bronze gongs and metallophones, drums, wooden flute and two-stringed fiddle - which together create a rich, distinctive sound. The gamelan is the traditional orchestra of Java, Indonesia, where it plays an integral role, alongside dance and various forms of theatre, in the cultural life of the people.

In 2016, Professor Mel Mercier, Chair of Performing Arts at the Irish World Academy of Music and Dance, University of Limerick, commissioned the master Javanese gamelan maker, Pak Saroyo, to make a new Javanese gamelan for University of Limerick. The beautiful set of instruments, which were made in Pak Saroyo's forge, near the court city of Surakarta in Central Java, over a period of several months, were shipped to Ireland and arrived in December 2016. The UL gamelan was named Sekar Arum (Fragrant Flower) by Pak Saroyo and was launched in February 2017 at a concert in the Irish World Academy.

The University of Limerick gamelan is at the heart of the Academy's recently established BA World Music and classes on the instruments are popular amongst undergraduate students specializing in vocal studies, contemporary dance and Irish traditional music and dance. The gamelan has also proven to be a valuable addition to Academy MA programmes in ethnomusicology, community music and music therapy, and it is set to play an important role in the new MA in Composition and Creative Music Practice.

Professor Mercier first encountered Javanese gamelan when studying for his MFA in World Music at the California Institute of the Arts (CALARTS) in the late 1980s, where his teacher was the renowned Indonesian performer and composer K.R.T Wasitodiningrat. In 1995, he brought the first Javanese gamelan to Ireland - a full set of bronze Javanese musical instruments made by the leading Javanese gongsmith, the late Pak Tentrem, for the Department of Music, University College Cork.

In 2013, Professor Mercier established the Irish Gamelan Orchestra (IGO) with the aim of developing a collaborative approach to the composition and performance of new, original music for gamelan. Under the artistic direction of Professor Mercier and assistant directors Kelly Boyle and Kevin McNally the Irish Gamelan Orchestra has, to date, been joined on stage by a host of high-profile performers, including Fiona Shaw, Duke Special, Martin Hayes, Brooklyn Rider, Joseph O'Connor, Iarla Ó Lionáird, Julie Feeney, Colin Dunne, Kate Ellis and Nick Roth. The IGO released its critically acclaimed debut CD, *The Three Forges*, in August 2015. The album features several original composition by Professor Mercier, which are performed by the ensemble in collaboration with a host of Irish and international guests.



“

...as a work of music and a work of art in general, it approaches a certain kind of genius

- Goldenplec review (2015)

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In a 2015 review, Goldenplec said: '...as a work of music and a work of art in general, it approaches a certain kind of genius.'

The Irish Gamelan Orchestra has appeared in concert at prestigious venues across Ireland, and at The Southbank Centre (London). In 2018 the ensemble represented Ireland at the first International Gamelan Festival in Java, Indonesia. In 2019, Professor Mercier composed the music with the IGO for the highly acclaimed Gare St Lazare production of Beckett's *How It Is (Part 2)*. The IGO will present 17 performances of the work with actors Conor Lovett and Stephen Dillane (*Game of Thrones*) in London in April-May 2020.

- Andrew Carey

Pictured: Forging of the Gamelan
Picture credits: Maurice Gunning, IWAM&D

UNIVERSITY OF LIMERICK AT A GLANCE

University of Limerick is a leading third level institution whose aim is to provide an enriched learning and social experience for all our students. Over our 50 years, UL has continued to produce graduates who excel, think critically, are innovative and are able to solve challenges on a global scale. Our four faculties sit on Ireland's best student campus spanning 366 acres, which is home to world class facilities including 429 laboratories, lecture rooms, creative spaces and a new student centre due to open later this year. The newly extended and refurbished Glucksman Library is the largest and most technically advanced library in Ireland. The facility has doubled in size to accommodate 2,200 reader stations and over 5,000 PCs. The one standout feature is the ARC (Automated Reserve Collection) - a 10 metre high book vault with a robotic crane and with the capacity to store 500,000 volumes in a space 1/9th of conventional shelving. It is the first of its kind in Ireland. Other highlights of the University include:

Our People 	>16,000 Students	44 Undergraduate Courses	140 Postgraduate Courses	3 Apprenticeships
Research Students	>1,600 Staff	650 Research Staff	Bronze Awarded Athena Swan	
Global Rankings 	Top 3 In Europe for Career Preparation Times higher ranking (THE) 2019	51-75 In Europe for Teaching Times higher ranking (THE) 2019	71-80 Top 50 under 50 QS World Ranking 2020	
International Education 	Erasmus Best Irish Erasmus Programme Irish Education Awards 2018	451 Partner Universities in 66 countries	1231 Exchange Students	538 Study Abroad Students
Global Reach 	1928 Research collaborations with organisations in over 107 countries Since 2014	52% Publications with International partners	30% Graduates with International placements	
UN Sustainable Development Goals (SDG) Impact	#4 (SDG8) Decent work and economic growth	#23 (SDG11) Sustainable cities and communities	#32 (SDG17) Partnerships for the goals	#36 (SDG16) Peace, justice and strong institutions



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**UNIVERSITY OF
LIMERICK**
OLLSCOIL LUIMNIGH

EMMA LANGFORD



Picture credit:
Zyanya Lorenzo

“
That’s me!
”

It’s bright and bubbly sounds when Emma sits down to chat to UL Links on her career story to date. Busking for a job, love, the notion to move to New Zealand and another to become a hairdresser all make up the key ingredients in Emma Langford’s colourful story.

A graduate and a performer, Emma has now reached a pinnacle and come full circle to offer her experience of the music industry to the University of Limerick MA class in song writing.

We sat down with the Limerick songbird to catch up on her journey from busking for free outside a café to a European tour and a second album.

“It has been something alright and it was only when I did a retrospective of the last decade recently that I realised the extent of the journey,” she says.

Emma recalled sifting through a compilation of songs, acting and modelling pictures, all stored online through social media, and found a 2013 picture of when she was “starting out”.

“My first gig was playing outside a café on Catherine Street in Limerick – and I was looking for a waitressing job – go figure. “The owner of the café didn’t have a job going but said that I could sit outside the café every Saturday, play a few tunes and if he saw more customers coming in because of my music, then I could have a job,” Emma reveals as she adopts that hands up confused emoji pose we all use on texts. >

> “So, I sat outside that café for hours every Saturday playing songs from a book of lyrics and chords without getting paid a thing, but I met the people who kick started my career.”

Emma said that experience and the open mic night at the Wicked Chicken “one of the finest bars that Limerick ever had and lost, was where I met people who were booking gigs elsewhere and the journey began.”

A notion of putting a band together led to “these random snowball moments of stuff just happening because I said yes”. Before any of that happened Emma graduated with a BA in voice and dance at the IWAMD, “but I didn’t do that course because I wanted to be a musician, I did it because I didn’t know what else to do. I had taken a year out, travelled the country working as a charity fundraiser with a new destination every two weeks.

During that time, another notion, as she puts it, came over her to move to New Zealand.

“I fell in love and I came home to save some money before going, but a few of my friends were doing a drama course on campus and I met up with them, fell in love with UL campus. That’s when I realised that this is where I wanted to be. I didn’t want to go to New Zealand despite having booked flights, received a visa and made the commitments. The plan was to become a hairdresser but I realised that UL is where I really needed to be”. >

In a journey of discovery, music was what the Limerick songstress wanted to do and as she explains, her time in UL uncovered everything that she knew she didn’t want to do in music.

“It was a very diverse course but it taught me a lot about perseverance, resilience and sticking with things. I made some amazing friends and contacts on that course.

Emma said that while any number of students take up courses because they are not entirely sure of what they want to do, being in a learning and developing space of education will give you the right path, “because it is about what you make of it”.

“If you go in to a degree thinking it will hand you a job or tell you who you are meant to be in the future, you’re cracked. You have to keep an open mind because it is the whole experience that will mould you. Not knowing who you might bump in to in those open spaces on campus can be so worthwhile because you never know what might happen out of that. There is a really strong interfaculty link here. There is always brilliant people studying across the campus just waiting for an opportunity to network and to work together by creating new possibilities and new projects. UL is fabulous place to do that and you just need to embrace it and be open to it.”

After completing an MA in UL, Emma continued on the performance stage and honed her skills and talent and as her time is predominantly filled with touring.

A return to UL for masterclasses and workshops offers Emma an opportunity to reflect on how far she has come.

“It’s not a journey I expected to land on because I wasn’t one of these people who had a burning desire to become a musician performing on stage to sell out rooms, but that’s kind of what’s happening.

“In saying that, I love to sing and perform and it has become a career or a lucky happenstance in a lot of ways.

Now, Emma says that she feels she has something to offer to the next wave of students in her field but would love to have had the advice to “stick with it” when she was younger.

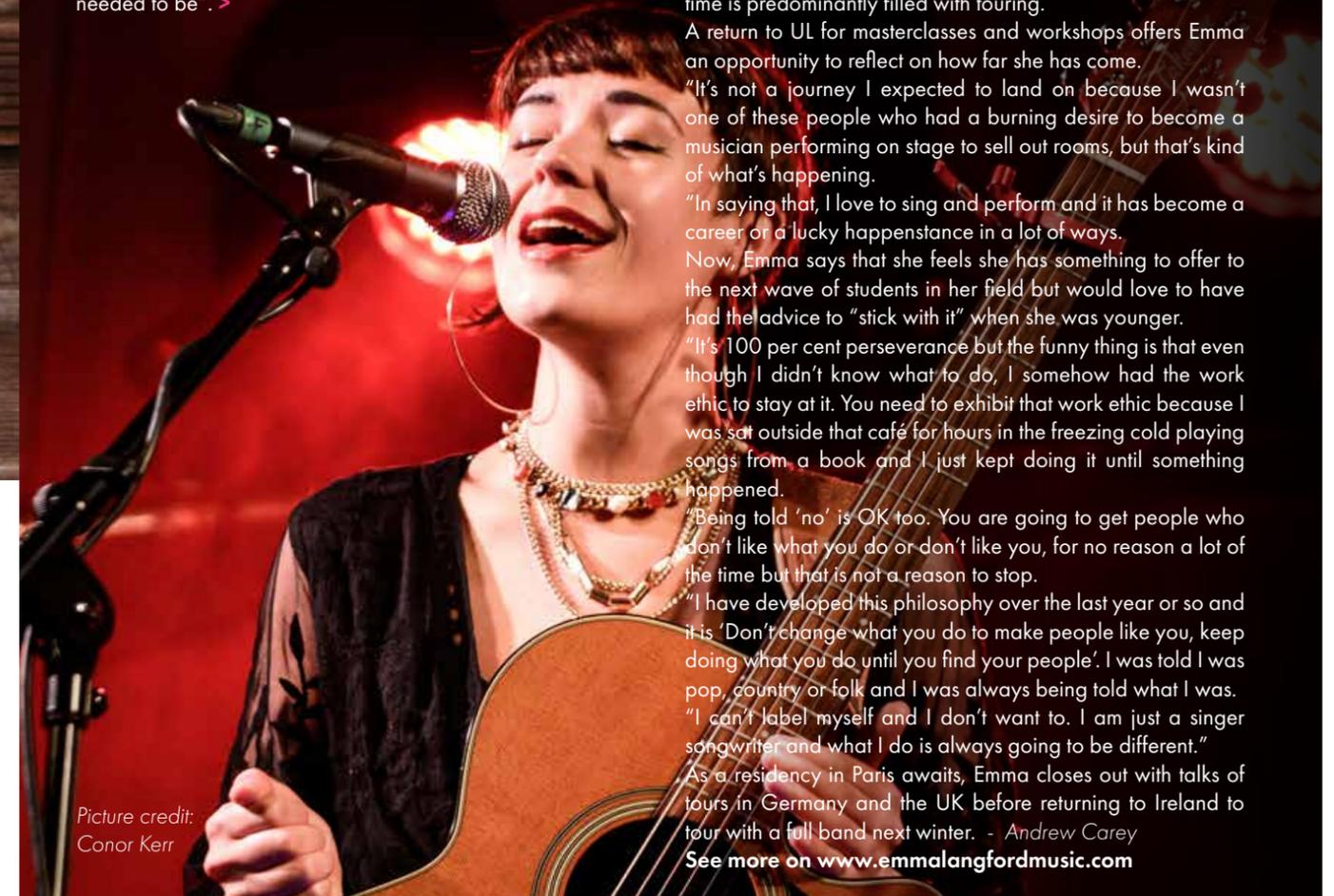
“It’s 100 per cent perseverance but the funny thing is that even though I didn’t know what to do, I somehow had the work ethic to stay at it. You need to exhibit that work ethic because I was sat outside that café for hours in the freezing cold playing songs from a book and I just kept doing it until something happened.

“Being told ‘no’ is OK too. You are going to get people who don’t like what you do or don’t like you, for no reason a lot of the time but that is not a reason to stop.

“I have developed this philosophy over the last year or so and it is ‘Don’t change what you do to make people like you, keep doing what you do until you find your people’. I was told I was pop, country or folk and I was always being told what I was. “I can’t label myself and I don’t want to. I am just a singer songwriter and what I do is always going to be different.”

As a residency in Paris awaits, Emma closes out with talks of tours in Germany and the UK before returning to Ireland to tour with a full band next winter. - Andrew Carey

See more on www.emmalangfordmusic.com



Picture credit:
Conor Kerr

STANDING OUT FROM THE CROWD

Kemmy Business School

The importance of accreditation is that it allows entities to stand out from the crowd, but few elevate to a higher class altogether.

The Kemmy Business School (KBS) and University of Limerick is now ranked amongst an elite group of third level institutions offering world class business studies – something that has really set them apart.

AACSB International added KBS to its accreditation list and now join only 5 per cent of the world's business schools in achieving this award. Founded in 1916, AACSB is the longest-serving global accrediting body for business schools, and the largest business education network connecting students, educators and businesses worldwide.

According to Professor Philip O'Regan, former executive dean at KBS, "accreditation is becoming one of the big markers of quality for business schools, so in a market where we are trying to differentiate ourselves, accreditation is increasingly important".

With 17,000 degree awarding business schools globally, "it's a big market and we are competing with not just the traditional competitors in Ireland, we are competing internationally.

"So the more markers of quality that differentiate us from our competitors the better," says Professor O'Regan.

Professor O'Regan explained that KBS developed a strategy several years ago under his predecessor Professor Donal Dineen "to pursue the three principal business school accreditations that are available – AMBA, which is specific to our MBA programme, AACSB which is the most globally recognised business school accreditation and EQUIS, which is the European equivalent, and is next on our list. Each have their own features and characteristics but they are the three global brands that distinguish business schools from one another – and we have two out of the three. I am very happy with that."

In gaining the AACSB accreditation, KBS has been recognised among the institutions that have demonstrated a focus on excellence in all areas, including teaching, research, curriculum development, and student learning.

We have been very successful thus far and it was unusual that we were granted the AMBA accreditation for five years as it is normally only given for three years, but it gave us the confidence to pursue the AACSB marker.

"AACSB is a much bigger beast and the accreditation is given to the University and not just the business school, but the business school is the mediator on behalf of the University. "What is very attractive about the AACSB, apart from its pedigree and its global recognition, is that it is a very fair

accreditation. It requires you to identify your mission – and it is quite specific in terms of research, quality of teaching and engagement with communities – and then to show how you pursue and achieve that. That's hugely important as it asks the school to show what we are claiming to do and be. They will come in, check and audit that, and if you do what you claim to do you will get the accreditation. So it is very fair and open and we fully engaged with it. Staff in KBS engaged with it wholeheartedly because a seven-year commitment is a long time for the team that led it. While all staff were involved, Ita Page, Michelle O'Dwyer, Sheila Killian, Michelle Carroll, Kathleen Keane and John McCarthy were very prominent right from the start. And our many course directors also played key roles."

Synonymous with the highest standards of quality, AACSB accreditation inspires new ways of thinking within business education globally and, as a result, has been earned by only 5 percent of the world's schools offering business degrees at the bachelor's level or higher.

Today, 856 institutions across 56 countries and territories maintain AACSB accreditation.

"We are extremely proud of this achievement, and our engagement with AACSB has been a very useful process," said Professor O'Regan.

"AACSB accreditation is most definitely a reflection of the exceptional work that takes place throughout the Kemmy Business School and a recognition of the efforts of all KBS stakeholders, but especially our staff and students."

AACSB accreditation provides a framework of 15 international standards against which business schools around the world assess the quality of their educational services. These standards ensure continuous improvement and provide focus for schools to deliver on their mission, innovate, and drive impact. AACSB-accredited schools have successfully undergone a rigorous review process conducted by their peers in the business education community, ensuring that they have the resources, credentials, and commitment needed to provide students with a first-rate, future-focused business education.

The benefits of our combination of accreditations, according to Professor O'Regan, is that it "places us in an even smaller pool of about 2 percent of business schools in the world.

"This is a fantastic calling card to go into international markets and say 'if you want to know how good we are, here are the measures that are accepted internationally, come study in Kemmy Business School'. There is no further argument or distinctions of quality that we need to make. That is sufficient.">

> Professor O'Regan says that the global reach of attracting international students now stretches both east and west.

"We can go to America, to the Far East and we can go to Africa and other important markets and AACSB and AMBA establish our credibility."

There is a group of about 80 schools with the triple crown of awards, Professor O'Regan said, "and we are very close to that calibre with the two we have."

Alongside partnerships with other accredited schools, KBS is also partnering with industry in its educational needs.

"Companies, national and multinational, that we already deal with will be reassured that we have the marks of quality and we can further our relationships to provide industry-focused, industry-led and industry-based learning.

"The next big play for us will be executive education where you are dealing with non-traditional programmes or short programmes for executives and senior management.

"It is in that context that accreditation will show its real strengths."

Professor O'Regan added that the KBS and UL will continue to supply a "pipeline of talent, but through our accreditations, we can offer so much more".

- Andrew Carey

“

We are extremely proud of this achievement, and our engagement with AACSB during the initial accreditation has been a very useful process...AACSB accreditation is most definitely a reflection of the exceptional work that takes place throughout the Kemmy Business School and a recognition of the efforts of all KBS stakeholders, but especially our staff and students

- Professor Philip O'Regan

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Pictured: Professor O'Regan
Picture credit: True Media

BERNAL GIVES YOU WINGS

When an industry professional advises a research team that they are helping ‘to close the gap between academic research and an industrial application’, they know that it is a fairly resounding endorsement of the work

And that is the case for University of Limerick principal investigators, Bernal Chair of Composite Materials, Professor Paul Weaver and Dr Ronan O’Higgins, of the IComp funded ProLaTS project.

The pair are behind the development of a new commercial aircraft wing box at University of Limerick which is made from lightweight composite materials for Airbus, a global leader in the design and manufacture of aircraft wings.

This novel design technique involves steering the fibres in the wing skin to increase the structures buckling load, which uses less material to achieve the same structural performance, leading to a lighter, more fuel-efficient aircraft. In addition, innovative manufacturing methods now allow the use of carbon fibre-reinforced thermoplastic materials in the structure, which have a higher structural performance and are inherently more recyclable than conventional composite material currently used in aircraft like the Boeing 787 and Airbus A350.

Traditionally, aerospace thermoset based composite materials require energy intensive autoclave (large pressurised oven) processing. However, UL researchers are using a process called laser-assisted automatic tape placement (LATP) that lays down successive layer of composite material, laser welding them in place during the lay-up. This type of in-situ consolidation of composite material allows the efficient processing of very large structures in a less energy intensive way and reduces associated processing waste.

The state-of-the-art manufacturing technique, LATP, minimizes the production steps, promotes the time and cost effectiveness and fulfils the demand for repeatability during the manufacturing procedure

Design methods focus on advanced stress analysis development and subsequent tool development that exploits a new combination of materials and manufacturing technology developed at the Bernal Institute. >

BIO Professor Paul Weaver:

Professor Paul Weaver was appointed Bernal Chair of Composite Materials and Structures at UL in 2016 and leads the Composites Cluster at the Bernal Institute. Paul is also Professor of Lightweight Structures and has been the Director of the EPSRC Centre for Doctoral Training in Advanced Composites in the University of Bristol for the last ten years. He holds a Royal Society Wolfson Merit award, has graduated 34 PhD students and has attracted research funding in excess of €50M. He has worked with design aspects of composite materials for over 25 years, working with NASA Langley, Airbus UK, GE Aviation and Vestas Wind Systems

This page (right):
Professor Paul Weaver
Picture credit:
Alan Place

(Left):
Dr Ronan O’Higgins
Picture credit:
Bernal Institute



“

By using thermoplastic material there is greater potential for recyclability of this product at the end-of-life stage. This is highly beneficial as there are many EU directives currently stating that all composite structures need to now be designed with end-of-life disposal or recovery in mind due to the large amount of fibre reinforced plastics (FRP) ending up in landfill

- Professor Paul Weaver

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This development has put the Composite Cluster at the Bernal Institute at the forefront of the advanced composites technology, generating interest from the world leader in the aerospace sector. Many benefits have arisen from the development of the innovative composite wingbox

- Professor Paul Weaver

Picture credit: S Ramadier/AIRBUS

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As a result of the research work at UL, a Memorandum of Understanding has been signed with Airbus UK after the project caught their attention.

In turn, Airbus UK have agreed to test the demonstrator wing box at their wing-testing centre in Filton in the UK, while aerospace material developer and supplier, Teijin Carbon Europe Ltd., are collaborating on the project by providing material and technical support.

The work is funded through the Science Foundation Ireland VARICOMP project and the Irish Composites Centre and aims to reduce weight in aerospace structures reduce fuel burn and increase performance in wind.

The VARICOMP research team received an award in 2018 for preliminary work in this area at the American Institute of Aeronautics and Astronautics (AIAA) Scitech Conference, the largest aerospace conference in the world.

Professor Weaver told UL Links that “the LATP technique is fully automated, more repeatable, quicker and efficient than traditional methods. Carbon fibre composite materials are considerably lighter and stronger than its metallic counterpart. As such, the considerable fuel reduction brings about a concurrent reduction of the impact that this component has on the environment”.

There is an environmental aspect to this according to the project leaders, as Professor Weaver explained.

“By using thermoplastic material there is greater potential for recyclability of this product at the end-of-life stage. This is highly beneficial as there are many EU directives currently stating that all composite structures need to now be designed with end-of-life disposal or recovery in mind due to the large amount of fibre reinforced plastics (FRP) ending up in landfill.”

As for the endorsements by industry professionals, Thomas Cook, Head of A350 Structures Architecture and Integration Team, Department – ESKI, AIRBUS said: “It is impressive to see

that the University of Limerick have used a component test to validate a group of research technologies such as thermoplastic integrated primary structure and non-conventional laminates.

“The team have learned a tremendous amount from this vehicle which will enable further development and optimise their research technologies.

“This approach is closer to that used in industry and will help close the gap between academic research and an industrial application.”

Lt Col David M Garner, International Program Officer of US Airforce Office of Scientific Research (AFOSR) and The European Office of Aerospace Research and Development (EOARD), also showed his interest to collaborate with the group after visiting and quoted about the research works conducted in Varicom project at Bernal Institute.

“The University of Limerick’s Bernal Institute possesses a remarkable ability to go from concept to implementation in a very short time. The combination of talent, knowledge, and ingenuity of the faculty, staff, and students, along with unique capabilities to produce bespoke equipment, processes, and methods enables their impressive range of research and accomplishments.”

Professor Weaver explained that the next step of this work is to further investigate and upgrade the research objective to large scale structures.

“There has been a significant increase on various environmental issues related to the composites materials industry, including the ever-increasing levels of non-recyclable plastic being used, and increasing level of greenhouse gases emitted worldwide.

“This development has put the Composite Cluster at the Bernal Institute at the forefront of the advanced composites technology, generating interest from the world leader in the aerospace sector. Many benefits have arisen from the development of the innovative composite wingbox.”

- Andrew Carey

THE FUTURE OF LAW - AI IN THE DELIVERY OF LEGAL SERVICES

A University of Limerick project is changing the way legal services are delivered

Artificial Intelligence is changing the way in which legal services are provided and University of Limerick is working closely with leading industry professionals McCann Fitzgerald Solicitors, who have invested in Artificial Intelligence and its role in the provision of legal services to clients. Sinead Eaton, Commercial and Company Law lecturer at the School of Law, University of Limerick explained that McCann Fitzgerald have worked closely with Neota Logic Inc. in this regard and use the Neota Logic platform which allows the development of apps and other automated work flows without a knowledge of coding.

Neota Logic developed an award-winning technology that consists of an AI-powered platform and comprehensive toolset that allows professionals to rapidly build and deploy application solutions that automate their expertise, increasing productivity, improving client satisfaction and creating new business opportunities.

“The School of Law approached McCann Fitzgerald and the outcome was the joint sponsorship of a project for 12 final year law students during which they developed an app for a non-profit organisation,” Ms Eaton told UL Links.

The app was to reflect a method of calculation of legal liability, analyse applicability of a legal instrument or audit compliance with some area of law.

“The project was the first ‘legal-tech’ module in an Irish University,” Ms Eaton explained, adding that “in UL, the final year law students take a capstone module which can take the form of completing a research article, working with Citizens Advice Bureau, studying the ISDA Master agreement, or other options which vary from year to year. Last Spring, AI in the delivery of legal services was one of the options offered”.

University of Limerick was one of three law schools in Europe, with the University of Manchester and London South Bank University, to run modules using the Neota Logic system. The three joined the ranks of over a dozen law schools globally which run legal-tech modules with Neota Logic. Cornell, Georgetown and University of Sydney, for example, were already offering modules on AI/Technology and Legal Services.

“As the first legal-tech module in Ireland, this was a very innovative and ground-breaking collaboration for the three main partners. The online teaching of App building by Neota Logic was exemplary and McCann Fitzgerald and the School of Law provided the students with many ideas on where AI could be used,” Ms Eaton explained.

The idea with the App is to harvest the legal knowledge once and allow the App apply it over and again without the need for the lawyers repeated input.



Pictured: University of Limerick Law Students
Picture credit: True Media

The School of Law was determined to ensure the students had the opportunity to learn of the legal technology developments in practice and the potential of AI in the future.

“Running the first legal-tech module in Ireland was a great achievement for UL,” Ms Eaton said.

“The students were encouraged to reflect on tasks within the work of lawyers which could be executed more efficiently and cost effectively using AI technology.

“From their interactions with Neota Logic and McCann Fitzgerald, Solicitors, they knew they were involved in something embryonic in the world of legal services. One aspect of my role is to liaise with our Law alumni and encourage them to mentor current students.

Ms Eaton continued, “We’re delighted to partner with Neota Logic and McCann Fitzgerald. Our aim is to provide our students with a progressive curriculum that will develop their skills and prepare them for the modern workplace. The introduction of this module, a first in Ireland, is testament to that commitment and will provide our law graduates with the skills they need to pursue careers in an ever-evolving industry.”

Barry Devereux, Managing Partner, McCann Fitzgerald said: “The future of law is not solely dependent on legal professionals as we need a variety of backgrounds to continue to drive innovation in our profession. Today’s clients are redefining how they want their legal services to be delivered. While legal expertise is still paramount, clients now rightly demand more efficiency, flexibility and innovation. It’s up to us to deliver that and that includes developing the next generation of legal talent to deliver it.”

- Andrew Carey



PESS RESEARCH ON SCHOOLS RUGBY INJURIES

New research at University of Limerick, which looks at injury incidence in the Men's and Women's All-Ireland League, has now been expanded to allow the IRFU to begin to monitor seasonal trends in rugby injuries also across the schools game.

The results of the analysis, jointly conducted by the IRFU and UL, highlighted the type, nature and severity of both match and training injuries occurring across the amateur game in Ireland. By monitoring this information, injury trends may emerge which will aid in the development and implementation of future evidence-based injury prevention strategies in order to minimise injury risk and enhance player welfare.

Data was compiled across 644 matches (vs 418 last season) from 32 All-Ireland League and Women's All-Ireland League clubs (25 male teams and seven female teams) and 95 Senior Cup schools matches from 11 schools. A total of 959 male, 195 female and 305 senior cup school boy players were registered with the IRIS project for the 2018/19 season.

Speaking on the analysis, Dr Rod McLoughlin, IRFU Medical Director, said: "This year's report allows us to compare the 2018/19 results with those from the 2017/18 season, enabling us to begin to see some trends.

"This year's data is from a significantly greater number of teams, including schools rugby, and it will enable us to guide the prevention and management of injuries. The IRFU is committed to ongoing longitudinal research to further enhance our understanding of the nature and severity of injuries in the game."

IRIS co-principal investigator at the University of Limerick, Dr Tom Comyns, explained that "the project has continued to expand and of interest, this year's reports include data from the school setting. This long term project will help improve the health and wellbeing of amateur players at all levels in Ireland."

The IRIS co-principal investigator said that the addition of schools surveillance this year "provides crucial insight into injury within the schools senior game in Ireland. The project in the future will also report on the incidence, nature and severity of injuries in schools junior cup, and underage amateur rugby."

- Andrew Carey

*Pictured: Eimear Considine
PESS Graduate, PE Teacher and
Irish Womens Rugby Player
Picture credit: Sportsfile*

Injury Frequency

A male player would have to play 15 matches to sustain one injury

A female player would have to play 27 matches to sustain one injury

A Senior Cup Schools player would have to play 13 matches to sustain one injury.



Senior Club Injury Event

59% of match & training injuries a result of the tackle

48% of tackle related injuries sustained by the ball carrier

52% of tackle related injuries sustained by the tackler

Training Injury Event

Majority of male training injuries a result of tackling and contact drills

Majority of female training injuries a result of non-contact/set piece drills

Majority of senior schools training injuries a result of contact drills



Male Club Match Injury Occurrence

5.3/1,000 player hours: concussion

4.1/1,000 player hours: ankle ligament sprain

3.9/1,000 player hours: hamstring strain

Female Club Match Injury Occurrence

5.3/1,000 player hours: concussion

3.4/1,000 player hours: ankle ligament sprain

2.9/1,000 player hours: knee MCL sprains



Schools Senior Cup Match Injury Occurrence

11.4/1,000 player hours: ankle ligament sprain

7.2/1,000 player hours: shoulder

Dislocations/ subluxations

6.6/1,000 player hours: concussion



IRISH CHAMBER ORCHESTRA CELEBRATING 50 YEARS

The Irish Chamber Orchestra celebrates 50 years in 2020 with a packed calendar of events scheduled for the year ahead. The immediate focus is on its upcoming Spring Season which sees the orchestra visits no less than seven venues in the first six months of 2020.

In February, the ICO celebrates Beethoven's 250th anniversary with BEETHOVEN 7 - one of the all time great symphonies - its unstoppable momentum captures the listener with its headlong energy. Jorg Widmann's own music demonstrates his inexhaustible inspiration, his combination of tones and a fruitful relationship with the history of music - his Con Brio overture is based on the same instrumentation as Beethoven's 7th Symphony.

In March, the ICO introduces the extraordinary Turkish pianist and composer, Fazil Say to Irish audiences for the first time, blending some of his own magical works with those by Mozart. The ICO's STRINGS ATTACHED April Tour (22-25 April) visits Ennis, Portlaoise, Sligo and Dublin with another colourful programme.

In May, the Irish Chamber Orchestra teams up once again with Irish National Opera for Mozart's sophisticated masterpiece THE ABDUCTION FROM THE SERAGLIO featuring a top line-up of singers including sopranos Claudia Boyle and Sarah Power and tenors Dean Power and Andrew Gavin.

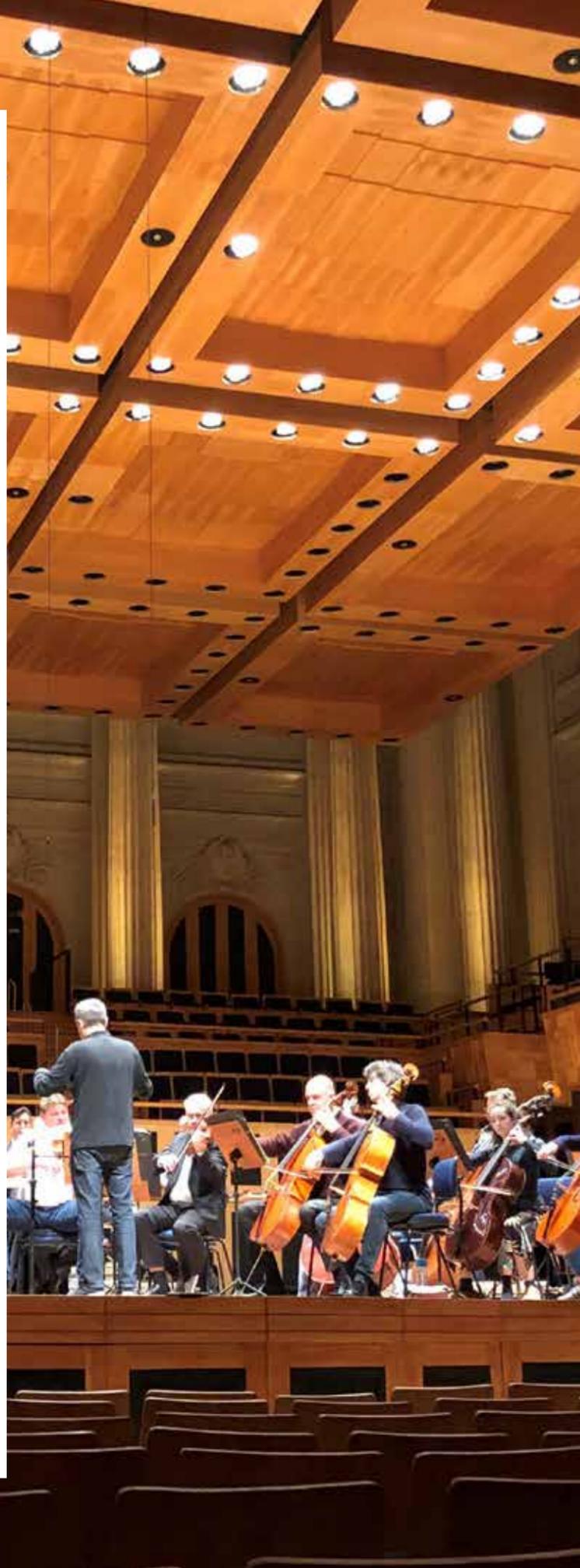
ICO 50 celebrations continue with international appearances in Würzburg and Neumarkt with Jörg and Carolin Widmann in June, a performance at the KILKENNY ARTS FESTIVAL in August and a celebratory countrywide Autumn 50 Tour in September.

The amazing Norwegian violinist Henning Kraggerud performs in October followed by a ICO Gala 50 Concert with Jörg Widmann in November ahead of ICO's festive offering. As always, great concerts by a great orchestra!

- Andrew Carey

For ticket/information see
www.irishchamberorchestra.com

Picture credit: ICO



MARIE CURIE @ UL

Pictured (L-R): Dr Ibrahim Saana Aminu, Dr Geraldine Canny, Dr Sheida Isihkli, UL President Dr Des Fitzgerald, Prof Gavin Walker, Dr Arash Kia, Dr Elaine Gallagher, Dr Declan Devine and Sharone O'Loughlin
Picture credit: Alan Place

In 2019, University of Limerick became the second best performing university in Ireland for Marie Curie Individual Fellowship awards and the best performing Irish university for COFUND awards.

At a recent event, UL President Dr Des Fitzgerald launched MarieCurie@UL where the achievements of four Individual Fellowship recipients and two UL faculty coordinators of Initial Training (PhD) Networks were recognized.

Dr Mehakpreet Singh is Ireland's first ever perfect scoring Marie Curie fellow who achieved 100/100 for his research proposal with Prof Gavin Walker. He is one of only nine in Europe to have done so in 2019.

Dr Ibrahim Saana Aminu, gained his PhD in 2017 from Wuhan University of Technology, China. At the time of application he had authored 46 peer-reviewed scientific publications in high impact journals in just five years (H-index: 17). Ibrahim is the University's Marie Curie Ambassador for 2020.

Dr Arash Kia obtained his PhD in 2018 from the University of Tehran specializing in artificial intelligence models to estimate financial risk in global capital markets. Arash is working with Dr Finbarr Murphy in the Emerging Risk Group based in the KBS and is using the same AI models to examine the liability of cyber risks, particularly for autonomous vehicles.

Sombel Diahm is based between Analogue Devices and Professor Ursel Baungert's lab at UL.

UL was the first Irish university to hold a Marie Curie Masterclass with 13 travel bursaries awarded to international applicants across all disciplines.

In Horizon 2020, UL has been awarded funding for 79 Marie Curie researchers: 62 postdocs and 17 PhD students all currently or soon to be based at UL. The UL chapter of the Marie Curie Association was launched at the end of last year.

At PhD level, Marie Curie funding is channeled through training networks, the so-called Initial Training Networks. The ITNs have been always feature of the EU Framework Programmes and they are, in effect model PhD programmes, featuring best practice in PhD supervision, with world class training and career development experiences built across the network. These networks are enormously popular with the academic

community with success rates hovering at 7%. UL's first Initial Training Network was awarded to Professor JJ Leahy and co-writer Dr Anne Marie Henehan in 2018. The network will study the recovery and reuse of phosphorous from dairy processing waste with 13 PhDs, of which three will be based at UL. All PhDs have been recruited and the project has commenced. The award is valued at €3.5m in total of which €550,000 will accrue to UL.

UL's first European Industrial Doctorate awarded to SSPC investigators, Sarah Hudson and Luis Padrela. This project is a unique network of three universities and Janssen Pharmaceutica (Belgium) and they will recruit and train five PhD students, three to be based/graduate from UL. The research will focus on novel platform technology for the development of long acting suspensions of complex active pharmaceutical ingredient. The project award is €1.29 million of which €400,000 will accrue to UL. Sarah herself is no stranger to this programme, having secured a Marie Curie Fellowship to work with Professor Robert Langer in MIT, USA in 2014.

Four other researchers are partnering in Marie Curie Initial Training Networks. They are:

Dr Jennifer Schweppe (Law) and Dr Amanda Haynes (Sociology) are the first researchers in the AHSS faculty to be involved in an ITN: Network of Excellence on Hate and Hostility;

Dr Eamonn de Barra (MABE: Biomedical Engineering) is involved in a Network on Antimicrobial Integrated Methodologies for orthopaedic applications; Professor Edmond Magner joins a network on Mass-transfer independent long-term implantable biosensors]

Finally UL is the only Irish university to be awarded three postdoctoral programmes under Marie Curie COFUND which are co-funded by the EU and Science Foundation Ireland Centres at UL. Prof Gavin Walker, Prof Brian Fitzgerald and Professor Conor McCarthy are leading these programmes which are funded for the next four years. They are currently recruiting fellows in such diverse disciplines as computer science, software engineering, advanced manufacturing, process engineering and smart manufacturing.

- Andrew Carey

DIABETES DRONE PROJECT CAN REACH NEW HEIGHTS

From a conversation around a coffee table, to flying a drone, off-shore, laden with medication to the Aran Islands, a concept was proven for researchers who have described the project's initial success as being a keystone moment for patient care. Why would this be the case?

Because the next wave of this project will see collaborating researchers from University of Limerick and NUI Galway extend the proof of concept into the use of drones to deliver medication and ultimately look to bringing an improvement to patient care for housebound people in the aftermath of severe weather.

Collaborating with Professor Derek O'Keefe at NUI Galway, University of Limerick senior AV technician Dr Kevin Johnson told UL Links that "the project started in late Spring 2018 around a coffee table where a seed of a thought came to life and a plan was formed.

"While meeting Professor O'Keefe NUI Galway to discuss project collaborations, he mentioned that he was interested in using a drone to deliver medications to patients with diabetes after severe weather events. This was because in October 2017, Storm Ophelia (Cat 3 Hurricane) had caused widespread post storm flooding and early Spring 2018 Storm Emma (Blizzard) had caused snowdrifts. Therefore many of Professor O'Keefe's patients with diabetes were left housebound and unable to attend their clinic and were concerned about running low on their insulin, a life saving medication. A novel way of delivering insulin to patients was needed in case a more severe, sentinel weather event occurred in the future."

Kevin told UL Links that he was just back from a trip to Scoresby Sound in East Greenland where he was filming humpback whales with a drone.

"One of Greenland's biggest summer guests is the humpback whale which comes like a migratory bird in the month of May and swims in the larger fjords along the coast until October, when it swims back to more southern climes.

"I was on board a schooner for several days and then travelled to West Greenland and Ilulissat and based myself there. The next four days were spent doing day and evening trips looking for humpbacks again and trying to capture some aerial photography and videos of these magnificent animals.

"Based on this drone adventure and my experienced gained, Professor O'Keefe consulted with me regarding the technological advances of unmanned aerial vehicles over the last several years and the current state of the art. We discussed

the possibility of sending a package to a remote island location and that was the start of the project #DiabetesDrone."

The flight involved a vertical take-off and landing (VTOL) drone delivery of diabetes prescription medications (insulin, glucagon) and collection of a patient blood sample (HbA1c) between Connemara Airport and Inis Mór, Aran Islands.

The launch team had a live FPV (first-person view) camera feed from the aircraft to ensure a visual from the drone once it flew beyond visual line of sight for safety. The second team on Inis Mór, Aran Islands, had a second ground control station with satellite telecoms so they could monitor the location of the drone to the destination, at the local airfield.

The drone supplied by Survey Drones Ireland was a Wingcopter 178 Heavy Lift, with insulated parcel delivery box for the payload, an all-electric vertical take-off and landing drone that transitions into a very efficient forward flight once up in the air. It reaches destinations of up to 100 km distance in less than an hour.

The project was run in partnership with several industry experts and stakeholders including, Skytango, Survey Drones Ireland, Wingcopter, Vodafone Ireland and global healthcare company Novo Nordisk.

Dr Marion Broderick, General Practitioner on the Aran Islands, said: "Drone delivery helps connectivity for island communities and has endless possibilities."

Marion Heron, a patient with Diabetes on the Aran Islands, said: "Insulin is essential for my survival and having a diabetes drone service in an emergency situation would ensure this survival while living on an offshore island.">



“

Drone delivery helps connectivity for island communities and has endless possibilities

- Dr Marion Broderick, GP, Aran Islands

”

Pictured: Professor Derek O'Keefe, NUI Galway and Dr Kevin Johnson, UL

> Back to the project details and Dr Johnson explained that one of the main concerns with regard to the project was regulations and adhering to the rules set down by the IAA - Irish Aviation Authority.

"The IAA gave us a special dispensation to allow this research to take place and conduct a beyond visual line of sight (BVLOS) autonomous drone flight. The flight is being used as part of the academic research work into the use of drone technology to improve patient care."

Dr Johnson added that the successful flight will also form part of wider research into drone corridor planning via radio frequency network mapping.

"A major issue with the telecommunication masts that are deployed along the flight path is that the antenna all point down towards the ground and transmit their signal there. However the drone is flying above the masts - in our case at approximately 120 metres above sea level - and there is little or no signal available.

"Our project telecommunications partner Vodafone had to work with the team and modify the masts to guarantee coverage for the drone along the flight corridor. This is something that will need to be taken into consideration going forward with drone deliveries," Dr Johnson explained.

This is not the first time drones have been used to deliver essential medical supplies, with blood, defibrillators and human organs for transplant all transported by drone. However, it is the first time the technology has been used to deliver diabetes medication autonomously and beyond the visual line of sight.



"It's the whole cycle of care," Prof O'Keefe said. "We did it in a highly regulated area of the EU."

"This is the keystone moment," Prof O'Keefe said. "We've shown it can be done safely with the right professionals."

Looking at the future of the project, Dr Johnson explained that now we have successfully completed the first vertical take-off and landing autonomous drone flight between the mainland and the Aran Islands (20km each way), our focus is switching to what we can do next in order to progress this innovative project."

To that end, Prof O'Keefe and Dr Johnson plan to submit a grant to a funding body with a focus on extending the proof of concept idea and working with the relevant organisations and bodies to make this service a reality to improve patient care.

[See more at www.diabetesdrone.com](http://www.diabetesdrone.com) and on Twitter @DiabetesDrone #DiabetesDrone

- Andrew Carey

STRAITÉIS D'EALAÍONA TEANGABHUNAITHE NA GAELIGE

Tá maoiniú taighde ar luach €35,000 é buaite ag foireann taighde as Ollscoil Luimnigh agus Coláiste Mhuire gan Smál. An Straitéis d'Ealaíona Teangabhunaithe na Gaeilge is teideal don togra, agus is í an Roinn Cultúir, Oidhreacht agus Gaeltachta agus Éire Ildánach atá á maoiniú.

Is iad taighdeoirí Ollscoil Luimnigh ná an Dr. Sandra Joyce agus an Dr. Eamonn Costello ó Dhámh Chruinne Éireann; agus an Dr. Sorcha de Brún ó Léann na Gaeilge i Scoil na Gaeilge, an Bhéarla agus na Cumarsáide. Na taighdeoirí ó Léann na Gaeilge Choláiste Mhuire Gan Smál ná an Dr. Róisín Ní Ghairbhí agus an tUasal Shane Grant.

"Deis iontach atá sa straitéis taighde a dhéanamh ar thionchar sóisialta, cultúrtha agus airgeadais na nEalaíon teangabhunaithe", dar leis an Dr. Sandra Joyce. "Cé go bhfuil taighde déanta go n-uige seo ar ealaíona faoi leith, is í seo an chéad straitéis dá sort a dhéanann taighde ar ealaíona éagsúla." Chomh maith le hiniúchadh a dhéanamh ar dheiseanna forbartha, ar bhaic agus dhúshláin, ar fhoinní maoinithe, cheisteanna rochtana agus ar rannpháirtíocht, is é is príomhchuspóir don taighde ná staid agus tionchar na nEalaíon Teangabhunaithe. An chéad straitéis dá sort, tagann sé sna sála ar Phlean Gníomhaíochta na Gaeilge 2018-2022, agus cuimsíonn sí na healaíona teangabhunaithe sna Gaeltachtaí agus lasmuigh de na Gaeltachtaí.

An grúpa oibre ná TG4, An Chomhairle Ealaíon, Foras na Gaeilge, Ealaín na Gaeltachta, Éire Ildánach, Udarás na Gaeltachta agus an Roinn Cultúir, Oidhreacht agus Gaeltachta. "Is mór againn an tacaíocht atá á cur ar fáil ag an ngrúpa oibre," dar leis an Dr. Eamonn Costello. "Léiríonn an tsuim atá á cur ag an bpobal sa togra taighde, mar aon leis na heagrais Ghaeilge agus na heagrais phoiblí. a bhfeadfaí a bhaint amach i gcruthú beartas poiblí in ealaíona teangabhunaithe na Gaeilge ag eascairt as an straitéis seo."

Tá físeán poiblíochta déanta ag TG4 chun an scéal a scaipeadh faoi obair na dtaighdeoirí, agus tá sé sin á thaispeáint faoi láthair ar TG4.

Is iad na healaíona teangabhunaithe atá mar dhlúthchuid den togra taighde seo ná an amharclannaíocht agus an drámaíocht, idir amaitéarach agus phroifisiúnta, idir thraidisiúnta agus chomhaimseartha; an amhránaíocht thraidisiúnta, chomhaimseartha agus chóirúil faoi seach; an scéalaíocht; lúibíní; agallaimh bheirte; agus an fhilíocht bhéil.

Agus í foilsithe, cuimseoidh an straitéis moltaí sonracha agus pointí gníomhaíochta do lucht beartais agus pleanála. Le linn na tréimhse taighde, rachaidh an foireann taighde i gcomhairle le geallsealbhóirí, an pobal agus eagrais éagsúla san áireamh.

Fearann an foireann taighde fáilte roimh aighneachtaí ón bpobal, ó eagrais, agus ó chleachtóirí ealaíon ar mhian leo moltaí d' ealaíona teangabhunaithe na Gaeilge a thabhairt le fios. Is féidir aighneachtaí a dhéanamh tríd an suíomh idirlín ealaionateangabhunaithe.ie.

"Léiríonn ár gcuid taighde go dtí seo gur minic daoine bheith rannpháirteach sna healaíona teangabhunaithe Gaeilge ar shlíte éagsúla gan a bheith ina gcainteoirí Gaeilge", a mhíníonn an Dr. Sorcha de Brún. "Cuireann an mhodheolaíocht taighde atá in úsáid againn na toisí débhríochá sin maidir le húsáid teanga san áireamh. Chuige sin, fearaimid fáilte roimh aighneachtaí i mBéarla agus i nGaeilge araon, cur chuige a thugann deis do Bhéarlóirí a bhíonn rannpháirteach in ealaíona teangabhunaithe na Gaeilge a dtuairimí a thabhairt trí aighneacht a dhéanamh."

Is féidir tuilleadh eolais a fháil ach dul i dteagmháil le baill den bhfoireann taighde, agus taighde na straitéise a leanúint ar Twitter @ealaiona agus ar Facebook Straitéis d'Ealaíona Teangabhunaithe na Gaeilge.



*Pictured (L-R):
Dr. Sorcha de Brún,
Dr. Eamonn Costello and
Dr. Sandra Joyce
Picture credit: The
school of English, Irish
and Communication*

FUNDING FOR RESEARCH AND DEVELOPMENT STRATEGY FOR THE IRISH LANGUAGE BASED ARTS

“

This is a great opportunity to research the social, cultural and financial impact of the Irish language arts, although research has been carried out previously on various art forms which use the Irish language, this is the first research strategy which involves researching a number of different art forms

- Dr Sandra Joyce

”

In addition to examining opportunities for development, barriers, challenges, funding sources, access and participation, the primary focus of the research is the impact of the Irish language based arts. The first strategy of its kind, it follows the publication of the 2018-2022 Irish Language Action Plan and encompasses the Irish language based arts in both Irish language speaking areas (Gaeltacht) and English language speaking areas. The Research Group are supported by a working group, drawn from TG4, The Arts Council, Foras na Gaeilge, Ealaín na Gaeltachta, Creative Ireland, Udarás na Gaeltachta and the Department of Culture, Heritage and the Gaeltacht.

"We are delighted to be supported in our research by the working group," says Dr Eamonn Costello. "In addition, the extent of the interest shown by the public, Irish language organizations and public bodies in the strategy is a testament to the potential it has in shaping public policy going forward."

A promotional video has been made by TG4 to advertise the research strategy, and is currently being shown on TG4.

The Irish language arts that form the basis of the research project are Irish language theatre and drama, amateur and professional, traditional and contemporary; singing, traditional, contemporary and choral; storytelling; lúibíní (a form of traditional song) and agallaimh bheirte (a form of poetic dialogue); and spoken word poetry.

The published research strategy will include specific actions points and recommendations for policy makers. In the course of the development of the strategy, the team will consult with stakeholders comprising practitioners, the public and a variety of organisations.

Members of the public, organizations and arts practitioners are welcome to make submissions and recommendations for the Irish language based arts through the Strategy's website ealaionateangabhunaithe.ie.

"Our research to date shows that some cohorts who take part in Irish language based arts are not Irish speakers," says Dr Sorcha de Brún.

"Our research aims to capture those nuances in language use and to examine the issues in further detail. For this reason, we invite submissions in English as well as in Irish in order to gather data from those involved in Irish language arts who may not speak Irish."

For further information, please contact any member of the team, or follow the research strategy on Twitter @ealaiona and Facebook (Straitéis d'Ealaíona Teangabhunaithe na Gaeilge).

A Research team from University of Limerick and Mary Immaculate College has been awarded €35,000 in funding by the Department of Culture, Heritage and the Gaeltacht and Creative Ireland to produce a Research and Development Strategy for the Irish language based arts (Straitéis d'Ealaíona Teangabhunaithe na Gaeilge).

The Researchers from University of Limerick are Dr Sandra Joyce and Dr Eamonn Costello from the Irish World Academy of Music and Dance and Dr Sorcha de Brún from Léann na Gaeilge in the School of English, Irish and Communication. The Researchers from Léann na Gaeilge in Mary Immaculate College are Dr Róisín Ní Ghairbhí and Shane Grant.

"This is a great opportunity to research the social, cultural and financial impact of the Irish language arts," Dr Sandra Joyce explains. "Although research has been carried out previously on various art forms which use the Irish language, this is the first research strategy which involves researching a number of different art forms."



Picture credit: Crude Media

TEDx University of Limerick fits the bill for a campus full of spark and discovery

First introduced to bring the spirit of TED's mission to local communities around the globe, the TEDx programme is the ideal project for curious individuals looking to discover ideas and spark conversation in their communities. Coincidentally, University of Limerick is full of such people. TED is a non-profit devoted to spreading ideas, usually in the form of short, powerful talks. It began in 1984 as a conference where technology, entertainment and design converged, but today it covers almost all topics – from business to science to global issues – in more than 110 languages. The vision for Limerick's first TEDx event stemmed from a serendipitous meeting between University of Limerick students and staff as final year students on the BA in International Business programme, Olga Dydykina and Gillian Kelly, had the idea to run a student-led TEDx event. In looking for advice on how to get the support of Kemmy Business School, they met Elaine Mullane, Personal Assistant to the Executive Dean, who had already been making enquiries about bringing a TEDx event to the university. After just one conversation, the three decided to join forces and apply for a licence, which was granted in October 2018.

The inaugural TEDxUniversityofLimerick event was scheduled for 18 June 2019 and in the eight-month lead-in time the small team worked on sourcing the best speakers, curating their talks and identifying potential sponsors. Tasked with managing the

social media and branding aspects of the project, Erin King, Senior Technical Officer in the Department of Accounting and Finance at Kemmy Business School was brought on board in April 2019.

An important part of any TEDx event is choosing the right venue. The production guidelines supplied by TED had very clear instructions on how the stage was required to look and how the event should be recorded, and it became clear to the team in the early planning process that the ideal place to host the event was right here on UL's campus. Founded in 1994 by Professor Mícheál Ó Súilleabháin, the Irish World Academy of Music and Dance is a centre of academic and performance excellence that includes two state of the art performance theatres. As well as a faculty of excellent performers and academics, the academy is home to a talented team of industry professionals who willingly gave their time to support TEDxUniversityofLimerick and the organising team. Technical Officer, Alan Dormer was instrumental in the planning process and his support and management skills ensured that the event ran without a single glitch.

Tickets for TEDxUniversityofLimerick sold out in less than 13 minutes and 100 audience members, including UL faculty, staff and students, representatives from local businesses and members of the Limerick and Clare communities, watched nine speakers address the theme of 'Current'.

For the organising team, 'Current' had three interpretations: an ocean current (a metaphor for direction and movement), an electric current (symbolising inspiration and energy) and current affairs, covering a broad spectrum of topical issues. >

> First to take to the infamous TED red circle was the MC Stephen Kinsella, Associate Professor of Economics at Kemmy Business School. Intrinsic to the production, Stephen introduced the theme to the audience and called for reflection and deep discussion on the ideas that would be presented on the TEDxUniversityofLimerick stage.

The first speaker introduced by the MC was Kevin King, Director of Design at Limerick-based media agency, Piquant Media. Through his work at Piquant, Kevin has worked on both local and national projects with a focus on human rights, education, culture and social change. Kevin's TEDx talk was locally focused as he discussed the wave of optimism currently washing over Limerick city with art as its catalyst.

Second to take to the TEDxUniversityofLimerick stage was Dr Patricia Scanlon, Founder and CEO at SoapBox Labs, who spoke about how technology can transform childhood literacy. Patricia holds a PhD and 20 years' experience in Speech Recognition and Artificial Intelligence, and has been recognised as Forbes as one of the World's Top 50 Women in Tech.

Next up was Mark Davies, Founder and Chair of Hooke Bio Ltd and Professor of Engineering Science at UL. Mark co-founded and acted as CEO of Stokes Bio, which was sold to Life Technologies in 2010 for US\$44m. His talk proposed that the current climate change crisis would be solved by replacing all fossil fuel burning power stations worldwide by Allam Cycles

Wrapping up the first half of the event were Ellen Ward and Máirín Murray, co-founders of Tech for Good Dublin. The pair discussed how digital technology can be used by communities to help solve challenges from climate crisis to homelessness in Ireland and globally.

A 12-minute TED talk video by Alex Honnold, an American climber best known for his free solo ascents of big walls, was shown.

The next speaker to take to the TEDx stage was Fergal Smith of Moy Hill Farm in Lahinch, Co. Clare.

Fergal's career trajectory took an unusual and unique turn when he went from professional surfing in the southern hemisphere to regenerative farming, and his talk spoke to how we are all part of one community and through a connection with nature and the earth, we can grow and encourage a sense of caring for all things.

Next up was Kemmy Business School's own Deirdre O'Shea. Deirdre, a Senior Lecturer and Chartered Work and Organisational Psychologist in the Department of Work and Employment Studies, touched on her award-winning research in work motivation and occupational health psychology to speak to finding motivation, passion and energy in our work. Following Deirdre was Sikhulekile Ruth Ndlovu, an inspiring young woman who gave a moving talk about her identity as an asylum seeker living in direct provision and her journey to becoming a UL student through the 'University of Sanctuary' scholarship initiative.

TEDxUniversityofLimerick's final speaker was Mark Graham, a lecturer in the Department of Creative and Performing Arts in Waterford Institute of Technology. Mark also performs with the electro-rock group King Kong Company and he produces

and presents the Irish Music Industry Podcast.

After TEDxUniversityofLimerick closed Limerick-based production company Crude Media were tasked with putting together the individual TEDx talks before they were uploaded to the official TEDx YouTube page and, within two weeks of the event, a global audience could watch the nine speakers take to the stage as viewing figures continue to soar.

Back to Elaine Mullane who told UL Links that the 2020 license has been granted to University of Limerick and the team can now realise their aim of hosting a bigger TEDx event this year. Eager to learn more about TED's vision and to explore how to improve on the TEDxUniversityofLimerick brand, Elaine and colleagues attended TED Women 2019 in Palm Springs last December and continue to research for a much bigger event. "Our main focus for 2020 will be to link with the city and hopefully compliment Limerick 2020. We want to invoke discussion of change, given the university's current status and proposal to move into the city. Our theme will reflect that. The team is already working with potential speakers and sponsors. I hope 2020 will have a focus on UL alumni and people connected with UL and Limerick."

TEDxUniversityofLimerick 2019 was sponsored by the Kemmy Business School, UL Hospitals Group, Munster Rugby High Performance Leadership Programme, Castletroy Park Hotel and Troy Marketing.

- Andrew Carey



Pictured: Sikhulekile Ruth Ndlovu and Deirdre O'Shea
Picture credit: Crude Media

WHAT HAS JEAN MONNET EVER DONE FOR US...?

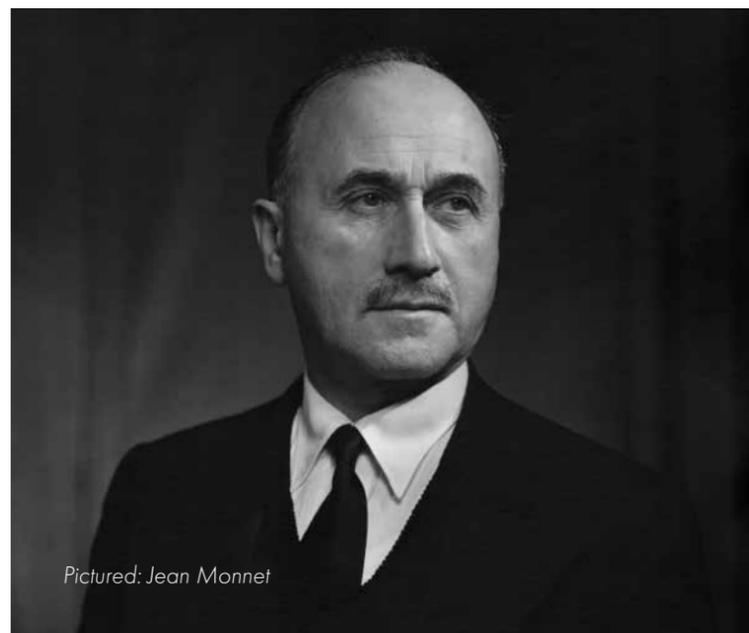
Quite a lot actually, and the programme named after him even more so. That is according to **Professor Joachim Fischer**, Jean Monnet Chair in European Cultural Studies at University of Limerick who writes on deep connections with Europe

In September 2019, the School of Modern Languages and Applied Linguistics was awarded one of the prestigious Jean Monnet Chairs named after one of the founding fathers of the European Union. Run under the auspices of the ERASMUS+ scheme, they aim to foster teaching and research in European Studies at third level institutions worldwide. This is the fourth Jean Monnet Chair awarded to UL and comes only two years after obtaining three years' funding in the equally competitive Jean Monnet Module programme.

These successes underpin the continuation of a long and proud tradition of the university's involvement in European Studies. In fact, the foundation of NIHE Limerick, UL's predecessor, in 1972 was first and foremost a response to Ireland's accession to the European Economic Community on 1 January 1973. It was hardly surprising that the new Limerick institute became the first third level institution in Ireland to teach an undergraduate European Studies programme; it was actually its only Humanities degree for quite some time. After 45 years, this particular programme is now one of the, if not the, longest-established undergraduate degree of its kind the whole European Union. The BA European Studies was joined by postgraduate programmes in European Integration in the 1980s, the launch of CEUROS, the Centre for European Studies, a designated Jean Monnet Centre of Excellence, followed in the 1990s.

Evidence of UL's European orientation has always been our intensive long-standing and prize-winning ERASMUS involvement, which places UL invariably at the top of the statistical table of all Irish third level institutions in terms of exchange participation. UL has also won awards for its integration of ERASMUS students from abroad. From the 1980s onwards, the ERASMUS programme has facilitated academic placements in virtually all EU member states alongside the continued co-operative education work placements, in recent years increasingly supported by the ERASMUS practicum scheme.

The Jean Monnet Module "The European Union: Broadening the Perspective" has been running with EU funding since 2017; it involves community interaction in the form of visits to three Limerick primary and secondary schools as well as surveys of attitudes towards the European Union conducted by mixed groups of Irish and ERASMUS/international students. The module is designed to bring European Studies to students who



Pictured: Jean Monnet

would not normally come into contact with the field. Another pioneering teaching venture currently in the pipeline is the first double degree MA in European Studies in Ireland run in co-operation with the Europa Universität Flensburg (Germany) and due to start later this year. The current Brexit debate and the new drive towards more direct links with continental EU member states in all areas should add to the demand for Europe-focussed programmes.

Anyone teaching at European universities will associate the EU-funded Jean Monnet Chairs with the academic disciplines of political science, law, economics and, to a lesser degree, history. In the last few years, and accelerated by Brexit, there has been a rethink of the EU's educational strategy and much more emphasis is now being placed on interaction with the wider community and on areas traditionally not served by existing schemes. One evidence of this wider remit is the first Jean Monnet Chair ever awarded to Irish universities with an explicitly cultural, literary and language focus – to UL!

As the holder of this new Chair in European Cultural Studies and after many years of involvement in the teaching of European Studies at the University of Limerick and currently Director of the undergraduate European Studies programme, I am now exploring opportunities for the Centre for European Studies to expand its remit, focussing on closer links with Limerick city on the one hand and on the other opening it up towards areas in UL traditionally perceived far from European Studies, such as science, in preparation for UL's participation in the EU's next research and innovation framework programme for 2021-2025, aptly named Horizon Europe. Beyond this, the three-year work programme to be undertaken by the Chair centres on Irish culture in an EU context and includes the areas of film studies, literary images of the EU, travel writing about Europe in the Irish language, engagements with book clubs all over the city as well as the integration of language teaching and European Studies in Irish secondary schools.

- Professor Joachim Fischer

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THE AGE OF DRIVERLESS CARS

Driverless cars are coming and while they won't be rolled out overnight, UL is very much at the forefront of helping to develop this innovation and address the questions that lie ahead.

The public perception of autonomous vehicles could sometimes be described as sceptical at best, unless of course you have a science and engineering hat on, but the advancement of this type of transport option is moving at a pace that we should be taking notice of.

As the reality of this lifestyle-changing technology nears, the key challenges facing the development of autonomous vehicles in Ireland will be addressed through a €4.2m research collaboration led by Lero, the Irish Software Research Centre based at University of Limerick.

The project brings together 11 companies to work on a variety of autonomous systems projects across the automotive, industrial and agricultural sectors.

As part of the programme, researchers from Irish academia including UL, global automotive and Irish firms will collaborate on key international challenges facing the development of driverless vehicles, especially those working in the same environments as pedestrians, animals and human-operated vehicles.

Researchers from across Lero along with SFI research centres CONNECT and Insight, will work with multinational industry partners such as Jaguar Land Rover, Kostal, Liebherr and Valeo; large indigenous Irish companies like Combilift and Dairymaster and smaller Irish companies including Greenval, Mobimetrix, PMS Pavement Management Services Ltd, Reamda and Transpoco.

The project funding includes a €2m contribution by Government through Science Foundation Ireland.

For context, there are six levels of driving automation, as defined by the Society of Automotive Engineers. Officially listed from 0 to 5: 0 means no automation – where the vehicle is fully controlled by the driver; and 5 means full automation, where the vehicle performs all tasks under all conditions.

With level 5 autonomy still in the future, we have seen some levels of integration in technology developments recently. Indeed the concept is so advanced that automotive manufacturers are investing vast amounts in autonomous R&D with a view to bolstering revenues of the future. >

> According to Professor Brian Fitzgerald, director at Lero, "Revenues from autonomous systems have been projected to be worth over \$100 billion by 2030. There is no reason why Ireland cannot be a serious research player in this vital sector.

"For example, we are already working with companies such as Valeo in Tuam on autonomous vehicle research and it is Ireland's variable climate and streetscape which gives it an advantage over the more uniform climate and road networks of, for example, San Francisco."

"Over the last few years we have been steadily expanding our research capabilities and experience in autonomous systems," added Joe Gibbs, General Manager, Lero who was responsible for putting the consortium together.

Dr Siobhan Roche, Director Science for the Economy, Science Foundation Ireland explained, "Autonomous systems (AS) represent a disruptive technology that is a crucial component of many industries, all of which are key to Ireland's future growth. The research knowledge gained in this programme will help to build world-leading capability in AS, helping to establish Ireland as an important player in the autonomous IT eco-system and delivering outcomes that can play a significant part in Ireland's economy."

The collaboration is a significant development as it brings together researchers from three key areas: software, analytics and connectivity.

CONNECT's researchers will focus on the connectivity challenge as it is of central importance for autonomous vehicles, which will need to communicate and share information with each other, with the city infrastructure and with vulnerable road users such as pedestrians and cyclists.

They will explore ways to make communication networks faster, more reliable and capable of handling increased information flows, while preserving privacy.

Ultimately, the goal is to make transport safer, less congested, and more environmentally friendly.

Professor Noel O'Connor, interim CEO of Insight SFI Research Centre for Data Analytics, added, "We are working with industry partners to study driver attention and engagement with a view to ensuring that the driver is in the loop when required and that their interaction is commensurate with their capacity at that time. The industry-led partner project will use inexpensive and unobtrusive sensors, mainly cameras, addressing situations where decisions are required in real time. Research will use a user-centred methodology to aid in user acceptance of connected/autonomous vehicles."

"All of these projects will enhance the education and professional experience of PhD and post-doctoral level researchers in the area of autonomous systems. This will support the growing needs for such talent in both Irish-based multinationals and start-ups," Joe Gibbs concluded.

- Andrew Carey

Picture credit: iStock

DECADES OF COLLABORATIONS BETWEEN UL AND CHINA SET TO CONTINUE

During a 2004 visit to UL, the former Chinese Premier praised the University's ethos of linkage and cited it as a model he wanted to encourage as a means of developing economic and social growth.

This framework of links between teaching, research and industry has prompted two decades of collaborations between UL and its Chinese partners.

Explaining the links further, UL Director of China Yi Bao said that "University of Limerick has a long established joint degree (2+2) programs in China in the areas of Science and Engineering and that has become the pipeline of the most demand talents working in the strategic industrial sectors in China.

"These graduates are now working in the multi-national companies and continuing studies at the postgraduate levels." With the support of Beijing Sports University, home for China's most Olympic medalists, Chinese students have the opportunity to spend one year in UL for a dual Masters in sports related subjects.

"Sport is the national priority and an important input to the Chinese dream," Yi explained.

"Research collaborations are always the focus of the university's commitment to China and last May, a China Scholarship Council delegation led by the Secretary-General, Mr Sheng Jianxue, visited the campus, in order to continue to support both PhD programs and project-based schemes.

"Further to that, UL will set up its own Chinese research seed fund to enhance the cooperation with top ranked Chinese universities later this year."

Allied to this is the recent development between UL and Chinese technology giant Huawei of a partnership and a €6million investment in Lero.

Additionally, the UL Innovation Centre is actively working with the Chinese Innovation agency promoting the technology transfer and commercialization of the university patents internationally, Yi explained.

The university's diversified approach in connection with China spans the academic collaboration to the outreach activities. Other links that the director highlighted included a training program hosted by the Kemmy Business School for State Administration on market regulation.

Musicians and dancers from the Irish World Academy were invited to perform at the St. Patrick's Day festivities in Shanghai and will return again this year.

Last September the UL China office was re-located back to the incubator of Enterprise Ireland in Beijing.

Yi said that "this strategic move allows us to work even more closely with the Irish higher education providers and businesses



Pictured: UL President Dr Des Fitzgerald and Dean of EHS Professor Rachel Msetfi with visiting Chinese students from Beijing Sport University
Picture credit: Alan Place

in the near future."

Twice recognized as Irish University of the Year by the Sunday Times in the last five years, Yi said that this is demonstrated by UL's commitment "to enrich student experiences."

"The dedicated International Education Division at UL has given Chinese students various aspects of support during their study year in the university.

"Annual festival celebrations include the Lunar New Year and the Mid-Autumn event, while the buddy program is particularly helpful for new students who are settling in to a completely new environment.

"Chinese students have the reputation of working hard to get the best results.

"Apart from their academic achievement, the university is keen to offer more opportunities to enrich student life and an example of that is Teng Pengpeng, from TESOL program, who has successfully completed his work as a member of the volunteer group in St. Mary's Cathedral.

"Jingyu Yan, from Beijing Sports University, is an EI student ambassador representing UL, and has travelled in Europe presenting her plan for the year ahead and future career aspirations and how the UL Master's degree will help employability in either Ireland or back in China.

Yi said that "University of Limerick has set up the clear goals and agenda for further engagement with this important market and UL President, Dr Des Fitzgerald will visit China in May.

"This will open the University for the next chapter of development in the Chinese market," Yi concludes.

- Andrew Carey

THE OPTIMEND STUDY: CHANGING HOW HEALTHCARE IS DELIVERED TO OLDER PEOPLE IN THE EMERGENCY DEPARTMENT

Crowding in Emergency Departments (ED) is a growing problem in Ireland and internationally and it is a problem that is likely to continue to increase in the future due to the changing demographics of population internationally: people are living longer and present with more complex healthcare needs

ED crowding and long waiting times affect healthcare outcomes and patient satisfaction and are also politically important, but a University of Limerick researcher is looking for ways to address this.

Over the past two years, Dr Rose Galvin, a Senior Lecturer in Physiotherapy at UL, led a nationally funded study, OPTIMEND, with a multidisciplinary team of healthcare professionals in the ED at University Hospital Limerick (UHL) to explore a new model of ED care for older people.

UHL treat between 180-220 adults in their ED on a daily basis and older people are among the greatest users of ED services and represent up to 25% of all ED users.

Dr Galvin explains that older adults utilise more healthcare resources, experience longer ED stays and demonstrate higher rates of poorer outcomes following emergency care such as unscheduled return to ED, emergency or unplanned hospitalisation, and even worse, death.

"EDs have traditionally been staffed by doctors and nurses, where doctors were considered the key decision-makers in aspects of patient referral, admission, and discharge.

"Health and social care professionals (HSCPs) such as physiotherapists, occupational therapists, speech and language therapists, medical social workers and clinical pharmacists were called to the ED to consult on an ad hoc basis.

"Increasingly, these HSCPs have extended their scope of practice to work within the ED," Dr Galvin said, adding that "there is limited high quality evidence exploring the impact of dedicated HSCP teams in the care of older people in the ED." However, The OPTIMEND study introduced a dedicated team of HSCPs in the ED to focus on timely assessment and intervention among people aged ≥ 65 years who attend the ED at UHL.

The team includes a senior occupational therapist, senior physiotherapist and senior medical social worker.

Dr Damien Ryan, Consultant in Emergency Medicine at UHL led the implementation of the study in the ED at UHL collaboration with Fiona Steed, Group Lead of Allied Health at UL Hospitals Group. The study started in December 2018 and ran through until end of May 2019.

A total of 353 older adults participated in the OPTIMEND study.

Half of these older adults received timely assessment and intervention by the dedicated HSCP team in the ED as well as treatment as usual and the other half of participants just

received treatment as usual without any input from the HSCP team.

Key findings from the study demonstrate that several older adults can be safely discharged from the ED following early assessment and intervention by a HSCP team in collaboration with ED medical and nursing staff.

The study also showed that older people who were assessed by the HSCP team spent significantly less time in the ED than those who did not receive HSCP care.

Ide O'Shaughnessy, senior occupational therapist in the ED, summarised the value of the interdisciplinary team.

"We are looking at the same person but with different perspectives and different lens. This collaborative and holistic approach, that is responsive to the changing needs and preferences of older adults, has undoubtedly enhanced the quality of care of those who attend the ED."

Speaking of future plan, Dr Galvin said that "the OPTIMEND study has been a resounding success in improving the quality, safety and timeliness of care of older adults in the mid-West. We are hoping to build on this success by turning our focus to the enhanced integration of care for older people across the hospital and community setting".

This model of care was a new venture for the ED at University Hospital Limerick and the Executive team at UL Hospitals Group have funded the HSCP team beyond the duration of the study.

- Andrew Carey



BIO Dr Rose Galvin:

Dr Rose Galvin is a Senior Lecturer in Physiotherapy in the School of Allied Health at the University of Limerick. Rose has a particular interest in improving the quality and safety of care for older adults and is the theme lead of the Health Services Delivery theme of the Health Research Institute at UL. Rose is also a fellow of the International

Primary Care Research Leadership Programme, hosted by the University of Oxford. She has over 100 ISI peer-reviewed publications and has supervised over 50 post-graduate students to MSc and PhD completion. She is Principal Investigator for the Optimend study.

ABOUT THE HRI

The Health Research Institute (HRI) was established in 2014 to enhance collaboration between and provide support for all researchers interested in every aspect of health research. The HRI has an emphasis on translational research with four overarching themes (Health Technologies, Health Service Delivery, Lifestyle & Health and Public & Patient Involvement) in which the University already has critical mass and which are aligned with the strategic direction of national and international policies. The HRI encourages and facilitates multi-disciplinary research across the University and clinical networks.

The OPTIMEND study forms part of the research portfolio at the Ageing Research Centre (ARC), a centre of strategic research interest funded through the Health Research Institute (HRI) at UL. ARC represents a group of interdisciplinary researchers who work across disciplinary boundaries to conduct excellent research that leads to improvement in the health, well-being and social inclusion of older people. The OPTIMEND study was run through the HRI Clinical Research Support Unit (CRSU) based in University Hospital Limerick. The HRI CRSU is an integral part of the HRI to support clinical research at a number of sites including the UL campus, UL Hospitals sites and primary community care health settings.

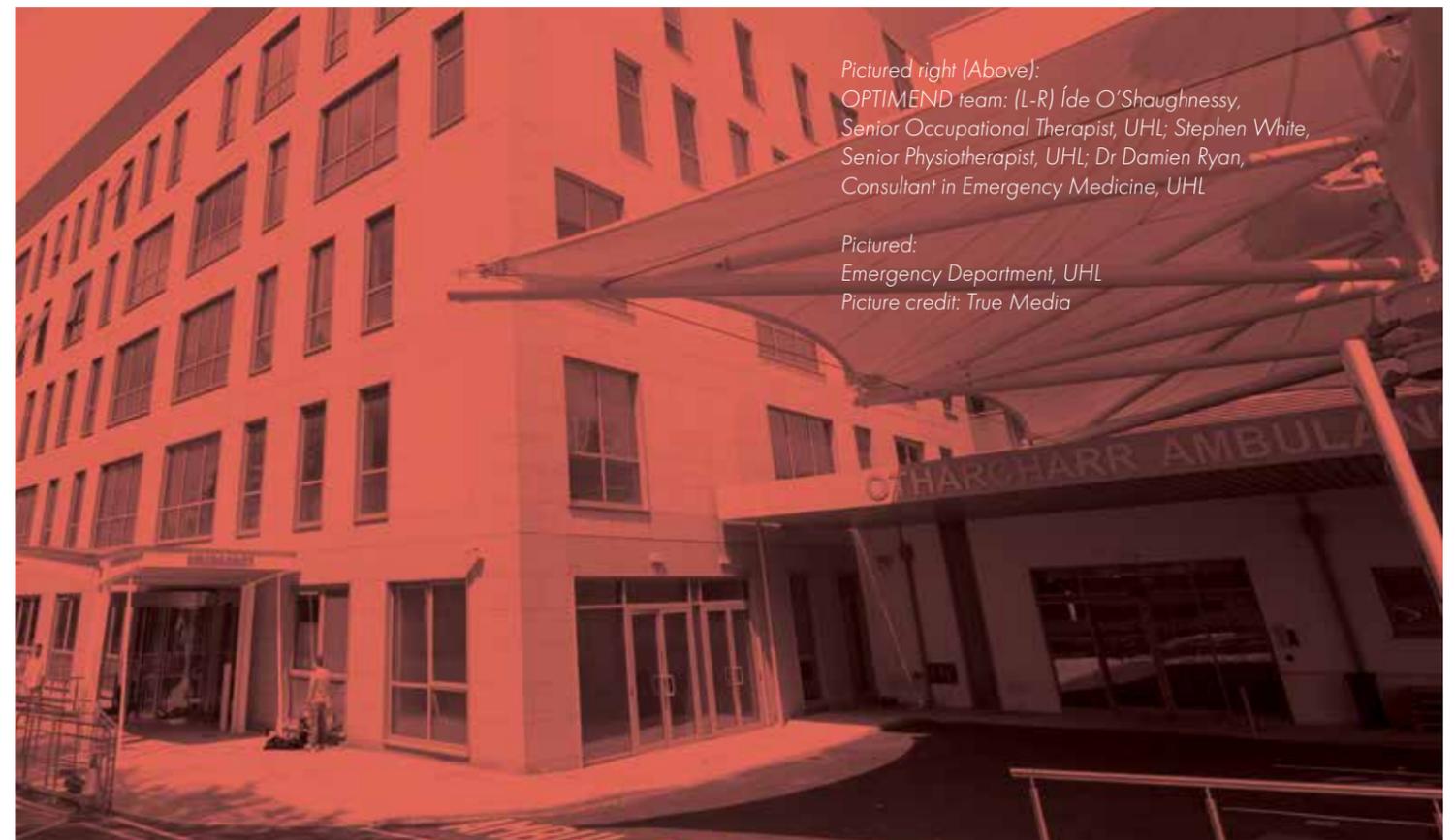


Pictured right (Above):

OPTIMEND team: (L-R) Ide O'Shaughnessy, Senior Occupational Therapist, UHL; Stephen White, Senior Physiotherapist, UHL; Dr Damien Ryan, Consultant in Emergency Medicine, UHL

Pictured:

Emergency Department, UHL
Picture credit: True Media



ECO-NEUROBIOLOGY AND HOW THE ENVIRONMENT SHAPES OUR BRAINS

The things we eat, the stressfulness of our lives, and traumatic events all have effects on our brains that we are just beginning to understand.

That is the story behind a book penned by Dr Andreas Grabruker, a world leading neuroscientist and expert on autism at the Bernal Institute, University of Limerick.

"Eco-Neurobiology and How the Environment Shapes Our Brains", explains how our environmental factors affect brain function and development and may be related to the occurrence of neurological diseases.

Eco-neurobiology is a field of neuroscience that investigates how environmental factors impact the brain through development and aging and Dr Grabruker's book was penned for the general public to help better understand this perception.

It takes the reader on a journey through the most recent findings in this field, covering how non-genetic factors influence our brain and may contribute to the development of disorders, as well as the everyday function of our minds.

Keeping your brain active activates brain regions that suffer from the onset of Alzheimer's disease; exercise; sunlight and sleep can maintain healthy brain function. Real scientific data and references are presented with case studies on autism, brain function and brain disorders.

"I wrote the book because I never cease to be amazed by how little we know about the things we expose ourselves to in our everyday lives.

"We seem to have exponentially increasing knowledge about the genes in our body, how the genes function on cellular level, and about how mutations in genes cause brain disorders.

"However, although we understand that the environment affects us, our mood, our mental health, we know little about how exactly this works," Dr Grabruker said.

Dr Andreas Grabruker's research and teaching interests include the investigation of genetic and non-genetic factors contributing to neuronal dysfunction, the development of novel research and treatment strategies using nanotechnology in the area of translational neuroscience.

In an extract from chapter 1, Nature vs Nurture, Dr Grabruker writes;

"In the history of science, the discussion of whether nature (our genes) determines what we do and who we are, or whether nurture (our environment, defined as "everything except that which is genetic") is the driving force behind our behavioural characteristics has been fiercely debated. In reality, many discussions could have been avoided by merely acknowledging the fact that these two concepts are not mutually exclusive. Indeed, we have a genetic setup that sets boundaries to what we can do, who we are, how we usually react, whether we get sick often or not, whether we are tall, energetic, intelligent, and much more.

"Sometimes, these boundaries are set very narrowly, which means that the environment can push a trait only a little; at other times, the environment is a major determining force and decides whether or not the potential for something that lies in our genes is awakened."

Dr Andreas M. Grabruker received his MSc in Biology with a focus on Genetics from the Technical University of Munich (TUM), Germany, in 2005. After obtaining his PhD in Molecular Medicine from Ulm University, Germany, he continued his research at the Department of Psychiatry and Behavioural Sciences at Stanford University, USA. He is a tenured Lecturer at the Department of Biological Sciences of the University of Limerick, and a member of the Bernal Institute and the Health Research Institute of the University of Limerick. His major research focus is translational neuroscience, and he has published eleven book chapters and over 53 articles in scientific journals.

- Andrew Carey



Pictured:
Dr Andreas Grabruker
Picture credit:
True Media

MIGRANT HEALTH STUDY AS PART OF WHO COLLABORATION WITH GEMS

The Public and Patient Involvement (PPI) unit at University of Limerick is to collaborate with the [World Health Organisation](#) in the area of migrant health



Pictured (L-R):
Dr Ailish Hannigan, Úna
McInerney, Dr Des Fitzgerald,
Dr Anne McFarlane and
Dr Jon Salsberg
Picture credit: Brian Arthur

The PPI Research Unit at UL's Graduate Entry Medical School (GEMS) has been designated by the WHO as a Collaborating Centre for Migrants' Involvement in Health Research.

The goal of the Centre is to build capacity for participatory research to involve migrants in health decision-making.

Professor Anne MacFarlane, Chair of Primary Healthcare Research, who established the unit in GEMS commented, "migrants are often excluded from the places where decisions are made about health services, policies and research.

"This is because they are considered 'hard to reach', perhaps because of language and cultural differences. Just like other population and patient groups, however, migrants need to have a voice in the health decision making.

"Their perspective on factors that impact positively and negatively on health are vital to identify priorities for researchers, health care providers and policy makers. Our collaboration with the WHO will look at how migrants' involvement in health decision making can be supported through the development of training and other resources for universities and research partner organisations such as the HSE and NGOs working with migrants," she added.

UL President Dr Des Fitzgerald welcomed the announcement as

an international endorsement of the commitment and expertise of the PPI Research Unit in the Graduate Entry Medical School. "It is fantastic to see our researchers in the Graduate Entry Medical School working in this important field of study – especially one that seeks to involve migrants in health decisions that can affect them directly," he said.

"This development sits well with UL's concern for migrants and refugees and a belief that a university education should be accessible to all, irrespective of any background.

"If you look at our Sanctuary scholarship programme, we are focused on building on our history of engagement by enabling and enhancing access for refugees and asylum seekers who come to our shores."

The WHO Collaborating Centre has a four-year work programme that includes developing guidance for those that would like to use a more participatory approach in their research, and the piloting of a training programme to build capacity for meaningful involvement of migrants and other stakeholders.

The Centre recently hosted a WHO seminar on Refugee and Migrant Health at UL GEMS which aimed to bust myths and promote facts around the health of refugees and migrants.

- Andrew Carey

UL STUDY FINDS JUST 13% OF CHILDREN MEET NATIONAL PHYSICAL ACTIVITY GUIDELINES

Real progress in improving the number of children that meet the Department of Health's national physical activity guidelines can only be made if "targets are set and achievable actions informed by best practice are put in place".

That is according to Professor Catherine Woods, chair of Physical Activity for Health, who made her remarks after a collaborative study found that only 13% of children are meeting the Department of Health's national physical activity guidelines.

The UL led study was conducted with Sport Ireland, Sport Northern Ireland and Healthy Ireland (through the Healthy Ireland fund) and led to the publication of the first all-island Children's Sport Participation and Physical Activity (CSPPA 2018).

It provides rich insights into the experiences of children and adolescents throughout the island around their participation in physical activity, sport and physical education. In the case of children from the Republic of Ireland it also includes comparisons with the results of the CSPPA 2010 study commissioned by Sport Ireland.

The report contains a mixture of positive findings as well as highlighting some significant challenges in the areas of physical activity, sport and physical education.

It involved some 6,600 students from 115 schools across the Republic of Ireland and Northern Ireland along with school principals and teachers from many of these schools. The CSPPA 2018 research team comprised of researchers and students from University of Limerick, Dublin City University, University College Cork and Ulster University.

Professor Woods, was the principal investigator on the study and said it was "wonderful to be part of this important research. "For Ireland to have established how active or inactive our children are, is an opportunity for change. CSPPA has provided us with an important benchmark, we know right now that only 13% of children are meeting the physical activity guidelines.

"What I would like to see is a real commitment that this is as low as we go. From here, realistic targets need to be set, achievable actions informed by best practice put in place, with robust regular monitoring to ensure we are on track for change. Only then, will we see real progress," she added.

Speaking at the publication of the CSPPA 2018, Minister of State for Tourism and Sport, Brendan Griffin TD, said: "From this excellent study, which has been completed with a most welcome level of North-South research collaboration, we can see that the majority of children are participating in organised sport, at either community or school level.



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Notably, this is the first time that Northern Irish statistics have been included in the collection of data in the CSPPA reports- this provides an excellent base for future policy development and delivery

- Antoinette McKeown

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"While that is good news, we need to build on this achievement by providing more support to parents, clubs and communities with the resources they need to ensure children have a broad range of opportunities to participate.

"A Sports Action Plan covering the period to end 2022 will be presented to Government by the end of this year which will contain a number of specific actions designed to address the significant challenges that this report is clearly outlining".

Kieran Mulvey, Chairperson of Sport Ireland's Board, said: "CSPPA 2018 highlights the significant levels of sports participation among children and young people on the island and the contribution that such participation makes to their health, well-being and development.

"Sport Ireland is committed to working in partnership with key stakeholders under the National Sports Policy to ensure that the benefits from being active are available to all our children and young people.">

The report contains a mixture of positive findings as well as highlighting some significant challenges in the areas of physical activity, sport and physical education. These include:



Only a small minority of children, North and South, are active enough to meet the physical activity guidelines of 60 minutes or more of moderate to vigorous activity per day. The numbers meeting the guidelines decline as children get older.



Levels of active and social participation in sport, in the school and in the community, are high although there are notable differences for particular groups based on age, gender, disability, and social class. Children who play sport regularly are significantly more likely to meet the physical activity guidelines.



In the Republic of Ireland, notable improvements were seen in active commuting (walking or cycling) to school since the previous study in 2010 although barriers exist here around the distance to travel to schools and the question of safety.



Compared to 2010, some improvements were recorded around the delivery of Physical Education although the report identifies that more needs to be done in this regard.

The full Children's Sport Participation and Physical Activity study and the Infographics which summarise all the key results can be downloaded at www.sportireland.ie/Research

> Antoinette McKeown, Chief Executive for Sport Northern Ireland, said: "Sport NI welcomes the launch of the Children's Sport Participation and Physical Activity Study (CSPPA 2018) as follow up to the original CSPPA Study (2010).

"Notably, this is the first time that Northern Irish statistics have been included in the collection of data in the CSPPA reports- this provides an excellent base for future policy development and delivery."

The study is expected to provide valuable baseline material against which future progress under policy developments under the National Sports Policy and National Physical Activity Plan can be assessed.

- Andrew Carey

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A Sports Action Plan covering the period to end 2022 will be presented to Government by the end of this year which will contain a number of specific actions designed to address the significant challenges that this report is clearly outlining

- Brendan Griffin, TD

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Pictured: (L-R) Professor Catherine Woods, Minister of State Catherine Byrne, Minister of State Brendan Griffin and John Treacy. Picture credit: ©INPHO/Ryan Byrne

+CITYxCHANGE: POSITIVE CITY EXCHANGE

Limerick as a 'lighthouse city': **Professor Stephen Kinsella** writes about an exciting new project that UL is taking the lead on

The world is experiencing a Thunberg moment. Globally we are waking up to the realities of climate change.

Electoral priorities are changing, nationally and internationally. The new President of the European Commission, Ursula von der Leyden, has said her policies will focus on a Green New Deal for Europe.

This Green New Deal is a vast change in the economic structure of the EU, with spending on clean power technologies to increase markedly, with warmer homes and shorter commutes. If the plan succeeds even partially, we will be well on the way to a new world.

Just knowing there is a path to walk towards a green economy, and actually walking that path, are quite different things. Delivering new energy generation technologies in the real world, with all of its on the ground complexity, is actually walking that path. Limerick is leading Europe in this process, and we will teach Europe what we learn.

Last year, together with Limerick City and County Council, University of Limerick led a Horizon 2020 Innovation Action we called Positive City Exchange (+CityxChange). This €20 million project puts Limerick and Trondheim in Norway at the forefront of clean technology delivery in Europe. Limerick is a lighthouse city for five other European cities in producing positive energy blocks.

A positive energy block produces more energy than it consumes. The buildings within the block share or trade the excess energy they produce. In Limerick, UL and the +CityxChange team are looking at an area in the city's beautiful and historic Georgian core, which includes getting thirty smart energy champions to install new clean generation technology on their properties. This requires the installation of new sensors, new photovoltaic cells, wind turbines, and even a tidal turbine within the Shannon.

We are not interested in imposing changes on groups of people—we are working hard to engage with citizens from all backgrounds with more than 40 events focussed on City Engage weeks which will take place each April and September, where Limerick's citizens can co-create the future of the city they want to see. As a lighthouse city, Limerick will then teach the five follower cities what it has learned.

Lots of things need to change on the ground in Limerick to make a clean, green urban energy system a reality. Everything from upskilling and training 30 energy champions so they are fully aware of the various investment models and the options for renovating their properties.

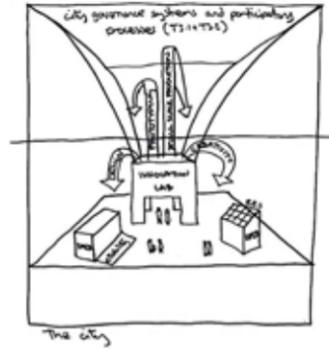


Illustration: A sketch of an operational innovation lab by Helena Fitzgerald, UL.

Pictured (below): (L-R) Stephen Kinsella, Rosie Webb, TD Richard Bruton and Dr Pat Daly

On the legal side, regulatory sandboxes will be created to live test project innovations in balancing the electricity grid and in compliance with building regulations. A citizen observatory, where citizens can come and see what is happening has already been established in Fab Lab Limerick, on Rutland Street. In April, citizens will be able to see project data in real time and use an interactive model to visualise and analyse the impact of positive energy changes they would like to see happen. An innovation playground will also come online in 2020, enabled by SAUL's Fab Lab, which is to extend to become an innovation lab with small batch manufacturing capacity to support an open innovation ecosystem. A space where academia, citizens, business and the city can collaborate to design and test rapid urban prototypes responding to particular challenges faced and accelerating the clean energy transition of Limerick's Georgian neighbourhood.

The work is challenging, exciting and new. It is what UL should be doing, in the city, together with the city.

One part of the project is the development of a Bold City Vision, to become part of the development plan of the city into the future. Through the development of the vision, we realised the positive city exchange project is both local and global.

Everything we are doing goes hand in hand with UN Sustainable Development Goal 11 (sustainable cities and communities), where a big emphasis is being put on "making cities and human settlements inclusive, safe, resilient and sustainable".

That is a goal UL shares with Limerick City and County Council for our city for the next decade.

Learn more at www.limerick.ie/CityxChange

- Stephen Kinsella



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