# DISRUPT

UL LINKS

/ Professor Kerstin Mey: First female president of an Irish university

/ UL through the COVID lens: A dynamic response to the global pandemic

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WINTER 2020

# WELCOME TO THE NEW EDITION OF UL LINKS

Since the 2020 Spring issue of UL Links, the world has changed dramatically as we deal with the COVID-19 pandemic, with its disruptive impact but also as a catalyst of change. Many stories from members of our community both on and off campus, draw a vivid picture of how initiatives in research and teaching have responded to the health crisis, how our members have given their all in front-line services and through civil engagement during the past months. For the Vice President Research, Professor Norelee Kennedy, her first year in office coincided with directing UL's research response to this highly infectious disease. The Interim Provost, Professor Nigel Healey is rethinking global engagement post pandemic, while the Director of UL Global, Josephine Page, reports on the international student experience on campus during COVID. Students and staff share their experience of 'civil defence'. For instance, a Q&A with Professor Liam Glynn and Dr Mike O'Callaghan gives insights on COVIDWATCHIRL and the frontline of GP care and research. Dr Patrick O'Donnell talks about his work with the marginalised in society during the pandemic, and students from Allied Health report about their involvement in interprofessional education at the Intermediate Care Facility that was located on campus. Professor Stephen Kinsella considers how UL can help build a post COVID future and John Slattery, President and CEO of GE Aviation and UL Alumnus, shares his thoughts on the pandemic, the aviation industry and UL's relevance to its rebirth. Dr Tadhg MacIntyre also offers lessons on a COVID paradox.

During this challenging time, it is important that we remember our strengths, focus on our community and share our inspiration. Links features an extensive interview with Loretta Brennan Glucksman, the outgoing Chair of the UL Foundation and philanthropist, which offers a rich account of her time and associations with this institution down through the years.

The launch of the Confirm HQ signals UL's lead role in the smart revolution of manufacturing and Professor Michael Zawarotko provides an update on his C-Minus project. This issue also reports that UL's collaboration with industry has led to Europe's largest battery-powered electricity grid stabilisation facility.

A range of Links stories recognise success, for instance researcher Michelle Conroy, who is the sole Irish recipient of a Royal Society Fellowship; UL graduate Niamh Damery's Econoc beehive design that received a James Dyson award and Professor Ann MacPhail's induction into the National Academy of Kinesiology in the United States.

The issue also contains profiles of our eight new Marie Curie Fellows, and three leading members of the Bernal Institute: Professor Gavin Walker, Professor JJ Leahy and Dr Sarah Hudson.

Education in the arts, humanities and social sciences plays an essential role in the affirmation of human values, no more so than during a pandemic.

In this spirit, Course Director Dr Diane Daly talks about the MA course in Classical Strings performance; Simon Thompson, lecturer in the Irish World Academy of Music and Dance, addresses the serious business of taking performance skills to the virtual world; Professor Shane Kilcommins shares insights on the educational relationship between UL and An Garda Síochána and Dr David Fleming highlights the attraction of local history to young and old. UL's civil mission is also embodied in Professor Maura Adshead's initiative to change the face of local government as well as in the update on Moyo Nua – the student led initiative helping farmers in Malawi.

There are many more stories in this edition of UL Links that look at how the many members of our wonderful community are playing their part to make the world a better place in challenging times. Locally, nationally and globally; I invite you to read them, to share them and to become inspired by them.

**Professor Kerstin Mey**
**President, UL**
@ULPresident

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# DISRUPT / A TIME OF RE–IMAGING

> While I was acutely aware that there had never been a woman at the helm of an Irish university during their 428 year history, this did not drive my thinking about my application. Its significance only fully sunk in when I received so many positive responses to the announcement of my appointment and perhaps most strongly when women I had never met before approached me in the street or in a shop to congratulate me and to emphasize the importance of being a role model with all its accompanying expectation of impact and change.

On 9 July 2020 I was appointed by the Governing Authority as Interim President of University of Limerick following the outcome of an open application process in the previous month. In the wake of an open call for Expressions of Interest for the Interim role, I underwent an intense process of critical self-reflection to ascertain whether or not to apply for the role. Having served just over two years as Vice President Academic Affairs and Student Engagement, I felt it important to assess my suitability for the role based on three aspects: my leadership skills; whether I had the trust and support of the campus community; and my ability to envision the future of UL in a situation of significant societal challenge not least under the impact of COVID-19 and the impetus for higher education to shift from 20th century industrial mass education into a model that meets the needs of the emerging society 5.0, i.e. a human-centred social order in which economic progress and the solution of pervasive social issues are balanced by the full integration of technological innovations of the 4th industrial revolution including the convergence of physical and virtual space.

While I was acutely aware that there had never been a woman at the helm of an Irish university during their 428 year history, this did not drive my thinking about my application. Its significance only fully sunk in when I received so many positive responses to the announcement of my appointment and perhaps most strongly when women I had never met before approached me in the street or in a shop to congratulate me and to emphasize the importance of being a role model with all its accompanying expectation of impact and change. >

Since I took up the role on 1 September 2020, serving on national academic bodies and interacting with leaders in business, industry and government, it has certainly further crystalised in very real terms that women in academic leadership positions are still in the minority. Indeed, a tweet had asked whether my presidency came about as the result of the Government's Senior Academic Leadership Initiative (SALI), designed to promote more female professors in Irish universities.

While my presidency is unconnected to SALI, that sustained government intervention has an important part to play in growing the number of women professors and changing and challenging the respective scholarly practices, values and role models in Irish higher education institutions.

That it took me a while to internalise the importance of the gender aspect in filling the role of the UL Chief Officer is, I can see with hindsight, down to a number of reasons. It certainly formed part of a protective response to prevent me from overthinking the enormous responsibility and accountability of the role, both in terms of taking on the institutional lead and of operating as a role model for other women in senior leadership positions and those who are aspiring to rise to such positions in UL, in the Irish higher education sector and internationally. Yet it is also intricately linked with my socialisation in East Germany, where the emancipation of women had been anchored in the doctrines of the GDR until its demise 30 years ago. While back then I understood that the socialist model of women's rights was deeply embedded in the concept of class struggle and the economic necessity of female labour, I also recognised the empowering impact of social achievements such as the availability of childcare, support for the professional development of women including quotas, and their right to self-determine their body albeit, within a still rather traditional model of the family and motherhood upheld by the State.

The almost full participation of women in paid employment was required by an ailing economy to mitigate against its low industrial productivity. The official notion of equality for women, perhaps best exemplified in the prescribed celebrations of International Women's Day on 8 March every year in East Germany, did little to modify gender stereotypes or individual gender roles as became obvious within the early years after the fall of the Iron Curtain and in the wake of reengineering society, models of practice and hierarchies of value based on the patriarchal structures of West Germany.

It should also be noted that only during the final years of the GDR did feminist voices surface more publicly. I still remember the enlightening and empowering effect it had when feminist theories openly entered the lecture circuit of Humboldt University. They served as a formative influence at the start of my professional life. And although I fully recognised the flaws in the socialist model of female emancipation, being the first member of my family to obtain a PhD and embarking on an academic career during the German unification period still instilled a strong belief that it is possible to knock at and shatter the glass ceiling.

Having taken on the role of President, I feel very privileged to head up an institution that is leading the way in addressing gender equality.

"Having taken on the role of President, I feel very privileged to head up an institution that is leading the way in addressing gender equality"

*Pictured: (Previous pages & this page)*
*Professor Kerstin Mey*
*Picture credit: True Media*

UL made substantial progress in achieving Athena Swan Bronze wards as an institution, and through its faculties and departments. In many instances these achievements are also firsts for universities in Ireland. Women are well represented in the UL senior leadership and amongst its professoriate. That said, there is no room for complacency as values and structures, practices and procedures impact peoples' lives and prospects, not just awards. The current COVID-19 pandemic impacts in different ways on an individual's ability to combine competing demands of increased workloads and intensified or disrupted work schedules, heightened learning efforts to transition into the virtual space on the one hand, and caring responsibilities, the confluence of professional and private spaces on the other. Studies have shown how this affects women's research performance in particular and thus their future career prospects. Building and maintaining an institutional culture and ethos, structures, practices and pedagogies for equality, diversity and inclusion to thrive, remains an ongoing priority for UL.

Such a sustained commitment is a fundamental prerequisite to widen access to higher education. Given the incessant and accelerated scientific and technological advancements, government's continued focus on the knowledge society and the extent of change to the ways people live, communicate and socialise, learn and work, access to quality education and life-long learning opportunities are as vital for social inclusion and stability, economic resilience and planetary health as they are for meaningful individual lives. This requires flexible educational pathways that can be accessed at any stage of life and career, support for life-long learning from government and employers, and inclusive curriculum design and facilitation of learning that meets the needs of a diversity of learners and prepares them for radically changing professional fields and occupational landscapes. Recognition of prior learning and prior experience are key ingredients for moving away from front-loading education as is a greater diversity of accredited learning options beyond a traditional university degree. UL is committed to the reshaping of university education that is anchored in its strengths in research and knowledge making, and builds on close collaboration with industry and academic partners, communities, the third sector and government. Reimagining higher education has to go in hand with a reform of its funding model.

The significant degree of disruption and uncertainty to jobs and patterns of employment brings into sharp focus the demand for autonomous, self-determined learners who are resilient, able to embrace ambiguity and complexity, and who can both navigate and shape social, economic and environmental change. Having experienced the collapse of one social order and reorientation in another system, I appreciate the importance of such competences. Self-determined learners are aware of their own strengths and weaknesses, their access to resources, and are actively drawn to complex challenges and opportunities. They are hungry to learn and can translate their ideas into gainful employment with social, cultural and environmental agency, and economic impact. Through advancing partnership models, UL is investing its future into pioneering such learner opportunities by actively supporting engaged citizenship and working towards a more livable and regenerative future. - *Professor Kerstin Mey*


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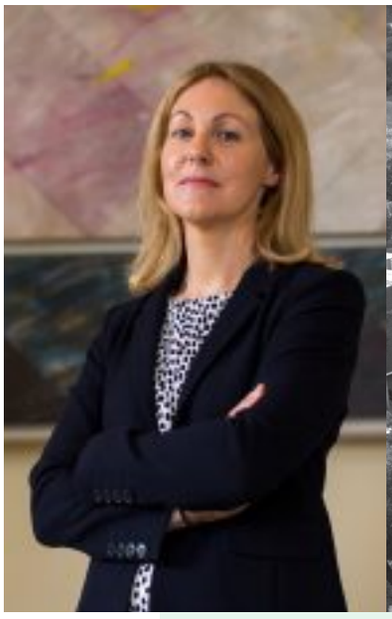
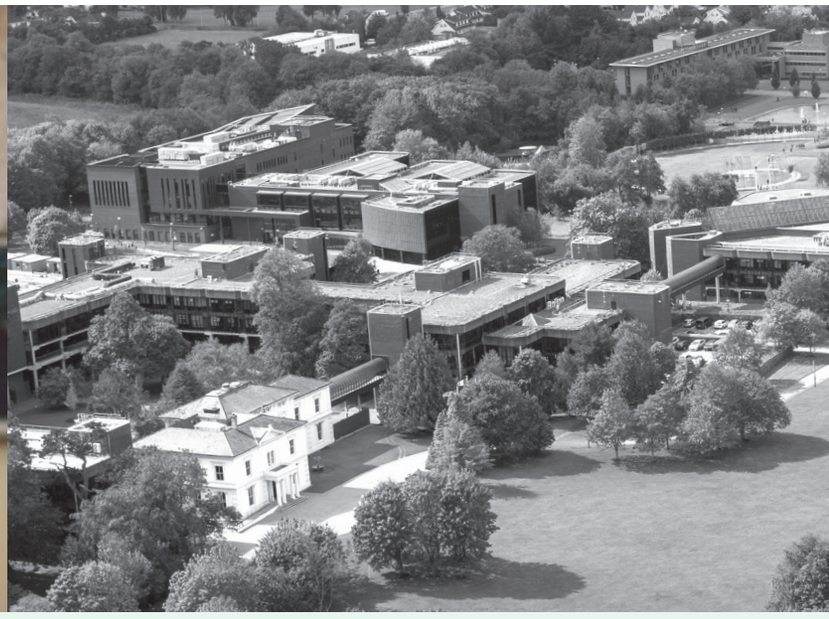
# UL THROUGH THE COVID LENS

Vice President for Research Professor Norelee Kennedy looks back on an eventful year





Researchers are essentially problem-solvers. They are intrinsically motivated to find answers to some of the world's greatest challenges. Throughout the global research community, COVID-19 is forcing us all to adapt rapidly in the pursuit of answers.

When I started in the role as Vice President for Research at University of Limerick in January 2020, I could not have foreseen how quickly we too would be forced to adapt in the face of a global pandemic.

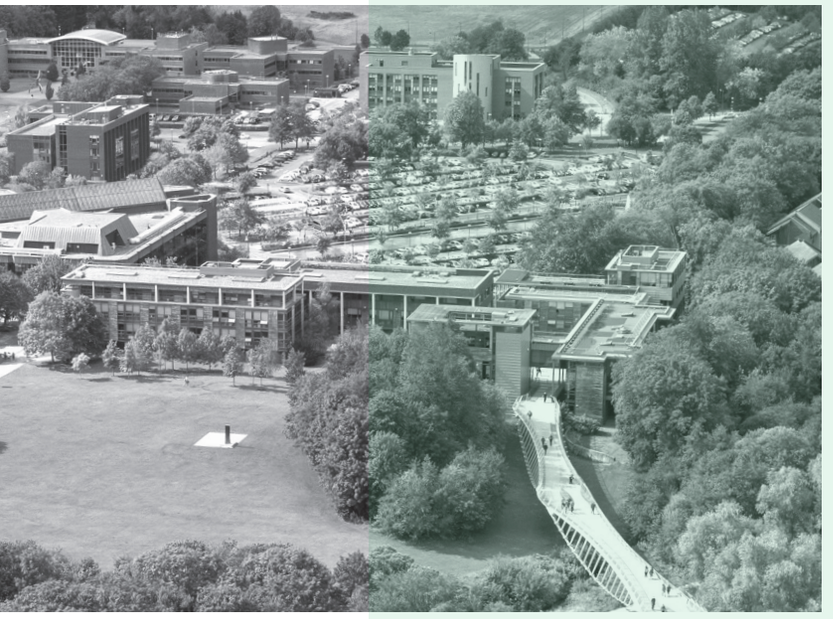
Lockdowns and restrictions have a major impact on research; from access to data and archives, impact on laboratories and experiments, restricted movement of researchers from around the globe and the additional juggling of roles when working from home. In this past year of uncertainty, I have been impressed by the resilience of our research community at UL and their in-built motivation to continue the pursuit of excellent and impactful research in spite of the many challenges.

> “I have been impressed by the resilience of our research community at UL and their in-built motivation to continue the pursuit of excellent and impactful research in spite of the many challenges”

COVID-19 can seem like a virus without parallel, however the world has dealt with pandemics of this scale before from the Spanish Flu, Polio, Smallpox, HIV, among others. These viruses changed the way people lived then, as we are similarly being tasked to adapt now. Throughout all of these global events, it has been the actions of government, public and community response and the expertise of researchers that have been instrumental in dealing with the contagion.

At a national level, members of the UL research community have been engaged in advising various government groups including the NPHET Epidemiological Modelling Advisory Group and Behaviour Change subgroup and the Department of Public Expenditure and Reform on how best to manage the emerging impacts from COVID-19.

Moving into the treatment and solution phase, UL colleagues are pursuing research funded by Health Research Board and Science Foundation Ireland across a range of areas linked to the pandemic. These include the development of a dashboard for policies to slow the spread of COVID-19 (Dr James Sweeney); ensuring Ireland's self-sufficiency in lysis buffer (an essential chemical for testing) (Dr Peter Davern and Dr Emmet O'Reilly); novel inhalable antiviral drugs to tackle COVID-19 (Dr Ahmad B. Albadarin); –uncovering evidence to inform Ireland's digital contact-tracing strategy (Dr Jim Buckley); developing rapid advanced production responses to frozen supply chains in hospitals (Professor Leonard O'Sullivan); the development of a rapid resource repository for health professionals: (Professor Alice Coffey); investigating the psychological responses to COVID-19 in health care workers during the delay and mitigation phase of disease management: (Professor Donal Fortune). The impact of the virus on society is a major concern and in response to this a cross university group, the UL Research for Policy and Society post-COVID19 group, has formed to enable a faster response and to support colleagues in developing further COVID-19 related proposals. >



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In parallel, UL staff also made significant contributions to the COVID-19 response including working on the frontline; assessing contact tracing software for national roll out; the adaptation and implementation of software within the hospital for tracking hospital acquired infection; the development of an online platform for the support of teachers and schools in the provision of interactive teaching tools for Leaving Cert students; provision of reliable and trustworthy information to the public through #COVIDWATCHIRL; development of an evidence based clinical guidance platform for healthcare staff and the provision of PPE to the Gardaí and staff who remain on campus as well as printing PPE using 3D printing technology for those working on the frontline of this pandemic.

A significant collaboration between academia and healthcare in this region was the turning of UL Arena into an Intermediate Care Facility to provide multidisciplinary care for non-COVID patients – freeing up capacity in University Hospital Limerick. Some of our students have gained invaluable first-hand experience working in this facility supported by UL and UHL staff.

Ireland's dynamic research community was not born overnight, it is the result of years of investment. This cannot be forgotten. Commitment to investing in research and development is central to Ireland's ability to address the sustainable development goals, to support a thriving economy and society.

Therefore, the announcement from Minister for Further and Higher Education, Research, Innovation and Science Simon Harris of over €3.7 million in funding for UL to support research programmes which have been impacted by COVID-19 is a welcome step. This support recognises that high quality research is an important asset and must be a continued priority for our society. A dynamic research environment attracts and generates a talented workforce, resilient industry and an ability to respond to the challenges we face.

There is no doubt, that as we emerge from these periods of uncertainty that the world will have changed dramatically. Some of these changes will be welcome, such as the impact on our environment, others will require new insights and supports to address, particularly in the areas of mental health and public health. >

*Picture credit: Alan Place*

At UL we pride ourselves in our collaborative and collective strengths, we work with industry, government and society to ensure the benefits of research can be felt by all areas of our society. Indeed, Ireland's investment in human capital and that interconnectivity of research to users will play an important role in protecting our economy and supporting quality of life for our citizens in the years to come.

Throughout the past year the resilience of the UL community has been evident and a beacon of light during dark times for everyone. As we continue to work through challenging times, the experience we have had of working together to solve problems and share that learning to support others will continue to serve us well as we move forward. UL research has had an impact in the fight against COVID-19 and we will continue to respond to this and the other challenges ahead of us.

- *Professor Norelee Kennedy*

# COVID REVEALS UL CAN HELP BUILD A POST COVID FUTURE

COVID does not destroy so much as reveal weakness. Associate Professor of Economics at University of Limerick, Stephen Kinsella writes on how "it is in our power to buttress the weaker parts of our society and economy revealed by the COVID crisis".

We know those most likely to suffer directly for the health effects of the crisis are older, sicker households. We know those most likely to suffer indirectly are younger, poorer households. We know sectors like accommodation, retail, events, and tourism are having the worst year on record. We know Ireland's arts and entertainment sectors have been hit harder by COVID than in any other EU country. We know sectors like pharmaceuticals and ICT are having their best year on record. Ireland's SMEs are struggling to survive, while Ireland's multinationals are thriving. COVID is a distributional variable.

If the virus shows where we are weak, it also reveals where we are strong. Studying the economic impact of the crisis, and contributing to the research expert advisory group of the National Public Health Emergency Team has taught me a lot about where we might strengthen our society over the next few years. Here are my thoughts on how to do that.

### Community responses typically trump national responses

The national response to the virus gets all the headlines, and that is natural for a highly centralised economy like ours with a population of less than 5 million people. Far from the headlines however, it is the community response that has simultaneously helped secure buy-in for restrictive measures and reduced the negative impacts of those measures.

For example, when vulnerable households were asked to cocoon, the community response around helping buy food, walk pets, see to loved ones, and more was very strong in Ireland relative to other countries.

The Limerick COVID-19 Community Response led the way nationally, particularly through its helpline service. Measures to increase, deepen, and amplify the work communities have done so far will be crucial in maintaining social solidarity as we learn to live long term with the virus.

Stephen Kinsella @stephenkinsella is an Associate Professor of Economics at University of Limerick, Chief Economics Writer, @TheCurrency Senior Fellow @GovernmentUoM and Hub leader @rebuildmacro

> "We have the students, we have the staff, we have the facilities, we have the ideas. We can build a post-COVID future here first if we are given the opportunity to do so"

### Research is everything

Research is gathering information needed to answer a question. There is no bigger question in the world than 'how to beat COVID'. UL has led the way nationally in the research effort to understand COVID. Several faculty members add their expertise to NPHET, more are working on research projects funded by Science Foundation Ireland and the Health Research Board. We know far more than we did in February of 2020, but we still have so much more to learn. The more we learn, the more we can help. The Resilience and Recovery plan has a strong focus on using a research-led approach to the crisis. The Government writes:

*"We shall seek to build on this initial work to deliver a nationally coordinated research effort, with the necessary research infrastructure and funding, to manage and respond to the health, social and economic consequences of the pandemic and enhance our preparedness and resilience for future emergencies."*

COVID and the research response to it are a university-wide priority. UL and UL's Research office led by Professor Norelee Kennedy are working on new initiatives so that research teams can make the largest contribution possible to the COVID relief effort. >

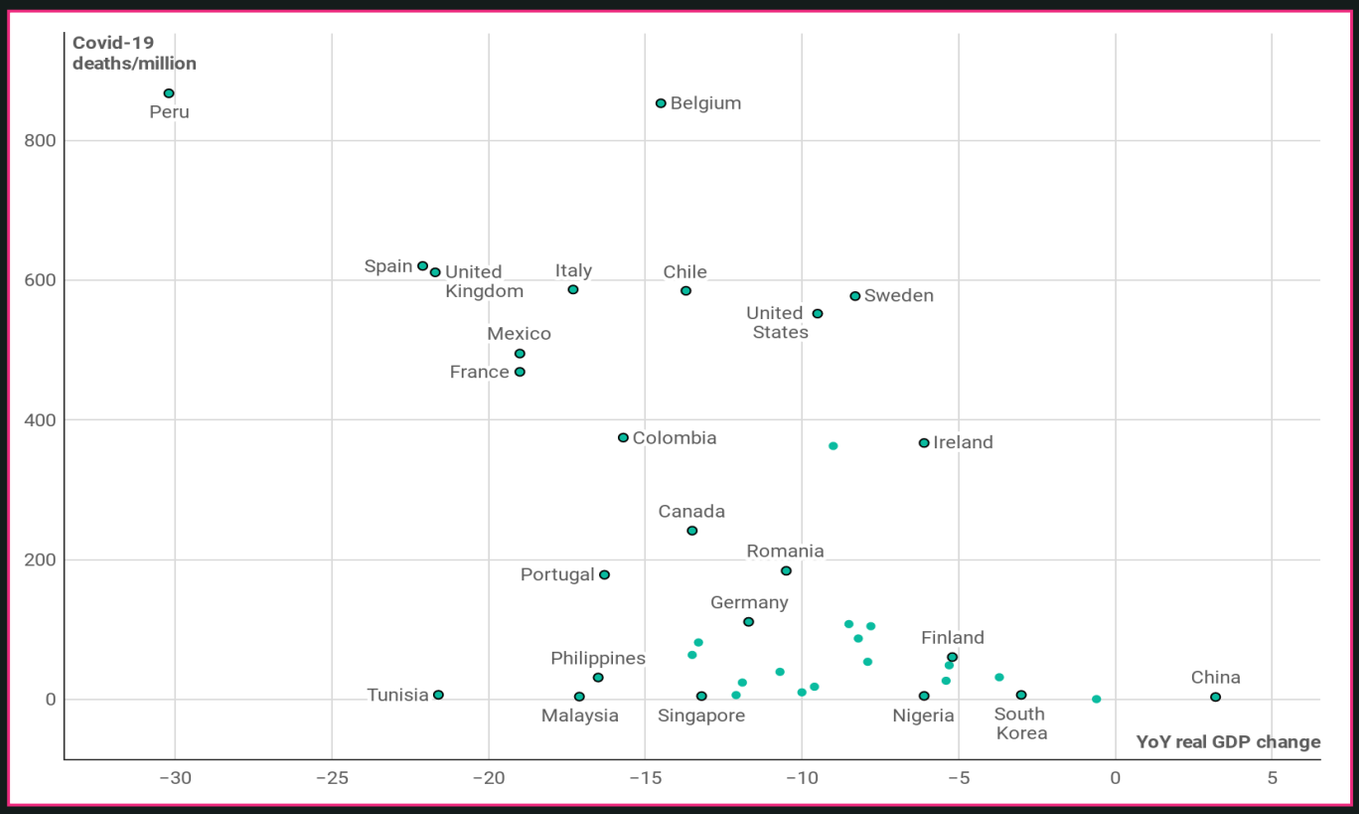



*Chart:* **The best economic policy is to get on top of the virus'**, *Source: World Bank, Created by: Datawrapper.*

## There is no tradeoff between the health of the people and the health of the economy

Economists at the start of the crisis assumed there would be a tradeoff between the health of the economy and the health of society. Lockdown the economy and you save lives, but gross domestic product, a measure of economic progress, would surely fall. Let the virus run wild without lockdowns, and you would have many deaths, but with a far smaller impact on economic growth.

The economists got it wrong. There is no tradeoff between the health of people and the health of the economy. The chart shows deaths from COVID per million on the vertical axis, measured against the change in gross domestic product from the second quarter of 2019 to the second quarter of 2020, the latest data available. If the economists were right, a country like Peru, with over 800 deaths/million, would have a very low fall in economic growth. Instead it has had the highest. A country like Finland, or South Korea, which had a very hard lock down, would have had very large falls in growth.

## It is the opposite. Countries that have protected their people have protected their economies.

You can see the reading for Ireland--we are solidly mid-tier here, recording 367 deaths/million and a fall of -6.2% in inflation-adjusted gross domestic product. That doesn't mean lockdowns are great ideas. The macroeconomy might not suffer, but the microeconomy is where people actually live and work.

> "The economists got it wrong. There is no tradeoff between the health of people and the health of the economy"

There is a strong role for policy in offsetting the worst effects of the crisis for the hardest hit sectors, in terms of replacing lost incomes, lost turnover, lost opportunities.

The other role is in retraining workers whose jobs will not, despite the best efforts of government, come back. Some firms will fail, some sectors will be forced by the crisis to transform how they do what they do, and this may include education.

Thinking carefully about what the shape of that retraining effort might be, who might deliver it, and what kind of Ireland might result from all of this change is the task COVID has set us. The good news here is that we are strong in this area already. UL is where the future happens anyway. We have the students, we have the staff, we have the facilities, we have the ideas. We can build a post-COVID future here first if we are given the opportunity to do so.

- *Professor Stephen Kinsella*

# RETHINKING GLOBAL ENGAGEMENT: PROFESSOR NIGEL HEALY

Starting a new job in the middle of a global pandemic is something that not many will have prepared for. However the new Interim Provost and Deputy President/Vice President Global and Community Engagement, Professor Nigel Healy did just that and he spoke to UL Links about his tenure to date and the challenges facing global engagement.

Having returned to Europe after nearly four years of working in the South Pacific at Fiji National University, Professor Healy joined the University of Limerick as Associate Vice President Global Engagement in April 2020.

Landing in Heathrow just as Ireland went into lockdown, Professor Healy said that he knew he was facing in to a challenging time, but one where he is "passionate about the power of global engagement and partnership as it would help to transform the impact and quality of university teaching and research and I was looking forward to the challenges ahead at UL.

"During my career, I have seen how international student mobility has rebooted the life chances of those who take part, especially those who had little exposure to cultural and ethnic diversity prior to coming to university. A few years ago, for example, I negotiated an arrangement at a UK university, under which students from low-income backgrounds were able to spend three weeks on a scholarship at a summer school at a famous Chinese university," he explains.

"I met the students for a final dinner in Chengdu the night before the summer school ended and was astonished to find all 30 planned to remain in China for several weeks and travel around the country with their Chinese 'student buddies'.

"At the pre-departure briefing before they left the UK, they had been nervous and even scared of the adventure ahead. Three weeks later, they were confident and excited about the prospect of learning more about China, possibly even working in Beijing or Shanghai."

Professor Healy asserts that one of the most important graduate attributes universities develop in their students is "critical thinking" – namely the ability to think independently, imagine different ways of doing and being, and challenge orthodoxy.

"Years ago, I realised that international mobility is one of the more powerful ways of instilling critical thinking. A colleague once described international mobility as "ontological shock", because it forces students to question everything they previously took for granted about the way the world works.

"I recall, as a young lecturer, going to work at a university in Lithuania in the dying days of the Soviet Union. The staff canteen closed between 12:00 and 13:00 because 'this is when the catering staff have their lunch'.

"Buying goods in stores required first queuing to find out if there was, say, any bread and how much a loaf cost, then queuing to pay the cashier who gave you a receipt, then queueing again at the bread counter to exchange the receipt for the loaf of bread.

> "During my career, I have seen how international student mobility has rebooted the life chances of those who take part, especially those who had little exposure to cultural and ethnic diversity prior to coming to university
>
> - *Professor Nigel Healy*

"It took ages to grocery shop, but 'everyone had a job'.

"I could not turn off the heating in my apartment, because the hot water was made in a combined heat and power station and piped from several kilometres away. The price of heating and electricity was fixed at a few roubles a month. It was inefficient from an economic point of view, but 'no-one ever went cold'.

"I remember these early experiences vividly, 30 years later, because I experienced them first-hand and they rocked my belief in how societies should be organised and what they should prioritise. So, during the COVID-19 crisis, with the constraints it has imposed on international mobility, like champions of internationalisation everywhere I have been thinking hard about how we should rebuild our global engagement when the pandemic is passed.

"In the years since 1991, when I was living in my overheated staff apartment in Lithuania, the world has changed and the climate crisis is now widely acknowledged as the major threat to our way of life.

"The COVID-19 pandemic has proved, after years of governmental handwringing and inaction, that if the circumstances demand radical measures, we can dramatically curtail travel and energy consumption overnight. >

> My vision for global engagement post Covius-19 is that we should regard international travel as a precious commodity, to be used sparingly and only when absolutely essential to achieve the university's goals
>
> - *Professor Nigel Healy*

"It follows that, as we reopen business and society, we rethink what travel and energy consumption is actually essential to our future lives and what savings we can permanently bank," he adds.

Professor Healy argues that despite the advances in virtual connectivity highlighted by the pandemic, international student mobility is one of the essential activities that should be prioritised.

"There is no way to recreate that ontological shock, break down cultural barriers and foster global citizenship without students living and working in different countries. However, it does mean that, to justify the carbon footprint of this activity, the mobility must be deep and meaningful.

"We all know of short-term student mobility that amounts to little more than academic tourism, with groups of students from the same country trudging around museums and complaining the food is not as good as it is at home. We need to commit to making international mobility authentic and inclusive.

"On the other hand, we should admit that part of the carbon footprint that universities left on the planet in the cause of global engagement needs to be rethought.

"As someone who has been involved in international university cooperation for over 20 years, I can recall flying halfway around the world to attend meetings and events that lasted a few hours. In the last year, for example, I flew from Fiji to London to attend a one-day meeting, getting back to Fiji before the jetlag had caught up with me. When the same organisation called a meeting two months later in Canberra, I asked if I could attend by videoconference to avoid a long roundtrip and I was told that the host university did not have any suitable facilities.

"One of the lasting benefits of the COVID-19 pandemic is that we have learned that face-to-face meetings can be replaced – not perfectly, but adequately – by virtual conferencing and the savings of travel time and damage to the environment make any marginal disadvantages well worth it.

"My vision for global engagement post COVID-19 is that we should regard international travel as a precious commodity, to be used sparingly and only when absolutely essential to achieve the university's goals.

"A few days ago, one of my close colleagues, Dr Janet Ilieva of Education Insight, launched a new Global Engagement Index (see www.educationinsight.uk/gei) to measure the global engagement of universities. Interestingly, she compiled this index not just by using the conventional measures of internationalisation – the percentage of international staff and students, the amount of internationally co-authored research – but also by the extent to which the university limits its environmental impact on the planet, not least by reducing its "Staff Air Travel Carbon Footprint per Student". Thank you, Janet – it seems I am not alone in re-envisioning the future of global engagement," Professor Healy concludes.

- *Andrew Carey*

*Pictured: Professor Nigel Healy*

**Prior to his appointment at the University of Limerick, Professor Healey held senior academic positions at Fiji National University, Nottingham Trent University, the University of Canterbury (New Zealand) and Manchester Metropolitan University, as well as teaching positions at the University of Leicester and Leeds Beckett University. He has been a visiting professor at various universities in Belarus, China, Poland, and the United States.**

**His current research interests are in the internationalization of higher education, transnational education and higher education policy and management. He has served as an economic policy advisor to the prime minister of Belarus and the deputy minister of economy of the Russian Federation and managed a number of multinational research and economic development projects in different parts of the world. He is chair of the QS-APPLE academic conference committee and, until recently, a member of the Council of the Association of Commonwealth Universities (ACU). He is a Fellow of the Chartered Management Institute and the New Zealand Institute of Management and Leadership and a Principal Fellow of the Higher Education Academy (Advance HE).**

# TIMES ARE DIFFERENT BUT THE WELCOME FOR INTERNATIONAL STUDENTS IS AS WARM AS EVER

University of Limerick welcomes 3,000 international students from 100 countries each year and is renowned for an award winning student support programme. The international student welcome programme each September is a key part of the student journey to the University and a key objective of the UL Global team is to ensure that the transition from home to Ireland is as smooth as possible. While that is a well-honed practice in normal times, this year we had to reimagine the whole process... a number of times.

The annual welcome programme includes significant pre-departure communications, a buddy programme, airport welcome, seven-day university orientation including social and cultural events, coffee mornings and culminating in a welcome address from the University President followed by an evening of traditional music and dance.

Josephine Page, Director of UL Global said that "while this year is different, the students' needs remain the central focus of our work. The Pie News commented 'As coronavirus continues to dramatically reshape how higher education systems operate, smaller destinations such as Ireland are commanding attention for their approach to supporting international students at a time when others have been accused of allowing them to "fall through the cracks"' .

"UL's Academic Planning Group was set up to plan programme delivery and student life for the academic year 2020/2021 and at an early stage developed key principles which would guide UL in developing teaching and learning for the autumn semester.

"International students who were set to travel to Ireland for their studies had the breaks pulled sharply on their planning. These students and their families worried about international travel and what might happen during the planned time abroad, the uncertainty introduced an additional layer of anxiety to the decision making. While UL did not have all the detailed answers in early summer, the key principles were an important indicator of our intentions and helped to assuage some concerns around studying abroad.

"To help address some of the uncertainty around safe travel an International Students Arrival protocol was developed in partnership between the Higher Education Institutions (HEIs) and the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS). This sectoral protocol was developed to ensure the safe arrival of new and returning international students to Ireland for the new academic year.

"The protocol focussed on the student's health and wellbeing before and after arrival in Ireland. Students were asked to show that they has no COVID-19 symptoms for 14 days prior to travel through daily health declarations. >

> To help address some of the uncertainty around safe travel an International Students Arrival protocol was developed in partnership between the Higher Education Institutions (HEIs) and the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS)
>
> *- Josephine Page*

> "On arrival students were welcomed at the airport and transported directly to their accommodation where they undertook training on health and safety protocol for COVID-19. Accommodation was offered free of charge for the 14-day restricted movement period, to students staying in the student villages for the year. Transportation was organised at national level from Dublin Airport to all HEIs from August 20th to October 4th and continues at local level for any late arrivals. All students received a welcome pack and a schedule of virtual events covering the 14 days of restricted movement.

"Despite this not being exactly what was anticipated in their dream to study abroad, our international students remain resilient and positive.

"The whole of government approach to supporting international Students in Ireland has been very evident throughout this pandemic. The Department of Justice and Equality has worked to ensure that students' visas were renewed automatically during the lockdown, the Department of Health continues to provide all COVID-19 related health care free of charge, a move which is warmly welcomed by our international students and the Department of Further and Higher Education, Research, Innovation and Science's work on the International Student Arrival protocol discussed above.

"It is our hope that this positive start to an academic year like no other will continue as everyone adapts to new ways of teaching, learning and living. The warm reception that Ireland and UL is famous for is still intact, and we have learned a new way to welcome international students that is both safe and maintains the human element," Josephine concluded.

*- Andrew Carey*

**Roshan Roy from India, joined UL to pursue a Master of Engineering in Mechatronics and said that:** 'Being a travel enthusiast, it was my dream to travel to Ireland and pursue my Masters'. The outspread of the pandemic was a huge turn back to my plans. But UL made sure that everything was done from their side to bring their prospective students to Ireland. On arrival at Dublin airport, the Greet & Transfer Service team sorted all students into groups and led us to the coaches going to respective universities without charging any fee for the transportation. UL had arranged quarantine accommodation for all international students. When we checked in with the accommodation office, they provided us with sim cards, face masks and other essentials. The two weeks of quarantine were well scheduled by UL with Virtual Tours, Quiz nights, Netflix Movie Nights and many other fun and interactive sessions to get started with university life.'

**Luyi Wu, an undergraduate student from China, talks about the buddy programme and her period of restricted movement at UL:** 'During this period don't worry about boredom, because the university has a buddy programme, my buddy would often chat with me when she knows that I was in self-quarantine. She explained some school facilities for me which is really kind. Besides, the university also has an orientation week before the start of the semester. During this week, the university holds different activities and lectures, including orientation meetings to explain the timetables, etc. And especially some interesting events, such as cookery class, morning exercise and movie night. These activities were fascinating, let me know more about Ireland and UL, and helped me through the boring self-isolation time. Overall, studying at UL is one of the best experiences of my life.'

**Neha Misri from India, MSc in Human Resource Management at the Kemmy Business School puts it very eloquently:**
'I cannot thank UL enough for handling the international students' arrival with such warmth, love and passion in these extraordinary times.'

**Trinidad Ricke Z is pictured with her mum before departing Chile for Ireland to study an MSc. Work & Organizational Psychology at the Kemmy Business School, University of Limerick:** 'The process of travelling always brings a sense of anxiousness and anticipation of what's to come, at least for me. It's always a nice balance of happiness and excitement, mixed with a tinge of anxiety and worry. Now, traveling in the times of COVID-19 is a whole other matter. Never mind the constant mask-wearing, constant temperature checking, the constant awareness to new signage you have to follow or the fact that airports seem like ghost towns. It's the actual realization of how much has changed for us that really hits home for me. The experience of moving to another country in a time of high uncertainty is a big deal and a tremendous challenge. Thankfully, with the help from UL global and the Campus Connect App they offered, it was a bit less of a solitary challenge. The way the university helped us get here, from the constant e-mail correspondence to the pick-up services were a god send for me, it made me feel a lot less alone in a time that was full of uncertainty and worry. Now that I'm settled in Ireland, even though the uncertainty hasn't eased that much, I'm very glad I took the plunge and decided to challenge myself and move to another country for postgraduate study (even in the times of COVID-19).'

# TAKING OFF: UL CAN BE AT HEART OF AVIATION RECOVERY AND THE INDUSTRY'S FUTURE

"Right now, as an industry, we are going through an unprecedented reset."

The opening words of John S Slattery, the proud Irish man and University of Limerick alumnus heading up General Electric's aviation unit as its president and CEO, its key aircraft engines division, as the global industry grapples with disruption caused by the Covid-19 pandemic. For context, GE Aviation is the largest manufacturer of aircraft engines in the world – for example a GE powered aircraft takes off somewhere in the world every two seconds

Speaking via video conferencing from his Cincinnati office, John is quick to explain that an "enormous reset on production and servicing requirements" has occurred.

"Furthermore, we are as a collective industry, struggling to find fidelity around the forecasts into next year and what those might look like because we are dealing with a virus that is proving to be uniquely challenging as we plan our businesses."

The Ennis native wouldn't be the first business leader to say their industry is facing enormous challenges as a result of the pandemic, but it's generally accepted the aviation business has been hit particularly badly.

"COVID has been brutal and I think as a leader you have to have empathy with your employees, but you can't sugar coat anything either. And, I'm not talking just financially or in business, it's recognising what is going on in people's lives, the stress on them and their families.

"At each town-hall I hold, I simply ask everyone to look out for one another because you never know the difficulties people are going through and I would encourage everyone reading this to do that too – so easy to do and if heartfelt can make a big difference.

"That being said, as sure as night follows day, this business, this industry and its people will recover.

"All we are trying to figure out now is the cadence around which that recovery materialises – as I need to be sized accordingly – when the market returns – it may be in a surge mode," he adds.

Cue the opportunity and John Slattery believes that there is a broader industry reimagining presenting itself, one that education and University of Limerick can be at the heart of for Ireland.

One of the silver linings or the outputs of COVID is the broad realisation that as the industry and the original equipment manufacturers in particular must radically reset. Today is an opportunity for the industry and the stakeholders that support the industry, to figure out how we can be a more environmentally friendly going forward."

To that end, GE Aviation is looking to its fuel burn efficiency and its correlation to CO2, NOx and noise emissions.

"We have just certified the largest commercial engine in the world; the GE9X and pound for pound it is the most environmentally friendly engine ever developed. It's actually in the Guinness Book of Records."

"So, right now what I'm looking for, and I will need support from the academic institutions when we think of the talent pipeline, is talent to come through the universities and the schools to funnel into GE Aviation in the years ahead as we chart our own path of a decarbonised world. GE has actually just committed to being carbon neutral by 2030.

"Whilst we have a lot of initiatives on our plate, fresh thinking will come from the universities and indeed I can say with some obvious bias that the University of Limerick is in a strong position to play a pivotal part," he adds.

Ireland is in a unique position to do that according to the US based CEO who notes that the country's reputation on the global stage when it comes to commercial aviation "is almost unparalleled".

"The only thing Ireland lacks today, if you are to be ruthlessly honest, is a broader and deeper Original equipment manufacturer presence on the island.

However, when you think about the air traffic control space that the Irish Aviation Authority manages, in conjunction with EUROCONTROL run by another proud Irish man Eamon Brennan, when you think about the footprint of aircraft lessors from around the world that own 45 per cent of the world's fleet and the majority of whom are headquartered in Ireland and Shannon, Limerick, Dublin and also when you think about the diaspora that have gone around the world as we have many Irish executives in airlines around the world as far away as Australia, it's hard to challenge the unparalleled status. >

"There is a level of uniqueness in the Irish universities, and certainly UL in having a dedicated aeronautical engineering centre of excellence coupled with the commitment over at the Kemmy Business School through the MBA and the dedicated aviation modules, as well as what is happening at other Irish universities, shows that Ireland is punching significantly above her weight when it comes to our commitment to aviation and the ability to influence it not only in Ireland but around the world. >

"What I have been impressed with in UL, since the NIHE days, is that UL pays attention to the 'voice-of-the-customer' and doesn't just embrace an academic pursuit in its own right," he says.

John is keenly aware that UL is there to bring tangible and realizable value to the industries that it supports, locally, nationally and frankly globally.

"I am a product of UL and I don't live in Ireland, but the fact that UL is very focused from that original lineage of NIHE in paying attention to the customer, refining and continuously improving courses to ensure that they are scratching the itches of what industry is looking for, is key and a real differentiator for the university.

"UL has always distinguished itself by being relevant in the market – its why the graduating classes are always in demand.

"Agility is in the DNA of UL and expressed through the academic staff. I have had the opportunity to talk to and stay connected with some of the staff even since I have left UL, their profound commitment to be relevant in the market coupled with the humility to always ask the questions of "are we being relevant and if not, where is it that we should adapt".

"If you have to pivot and change, then that is what you have to do. It's what UL does as its programs adapt over the years to remain relevant. UL taught me that ability also and it has served me well.

"While I live in Ohio, I still have a home in Ennis, and I love spending those precious few nights a year there – the West is where I am from and will always be home. Unfortunately, I get home less and less now, but I will never consider myself an outsider.

"The West of Ireland has unique opportunities and challenges and I have always hoped to see the development and growth of Shannon Airport. As a proud Irishman living abroad, I am always encouraging people to travel to Ireland and go to the West and fly in and out of Shannon.

"I am looking at here in Cincinnati where we are in the middle of the United States and Amazon is going to put a major hub and logistics centre and I often wonder if something like that could work in the West of Ireland and even near where UL is. With hubs it's possible, because all you are doing is connecting the dots with airbridges.

"However, when you are dealing with a part of the world with a smaller catchment area and smaller population, you are always going to have unique headwinds and challenges in developing the airport," he adds.

Crediting the work of the leadership team at Shannon, John Slattery believes that the airport needs to evolve for the region to thrive. Expecting it to become a major passenger airport anytime soon is unrealistic he said.

Therefore, creating a cluster of other businesses around Shannon that are aerospace related and served by education and training has been "insightful".

There should be an exploration of "ways to harness all of the unique energies to bring value to the West", John argues.

"The airport is a magnificent piece of real estate and positioned beautifully on the periphery of Europe and I believe there is a place for Shannon so broadening the cluster of aviation related businesses is in everybody's best interest," he says.

It can be done "with a little imagination", he believes .

Added to that, John feels that UL, "rooted on academic excellence and an ability to focus the lens of academia on the requirements of business and industry, is somewhat unique."

"UL has a diaspora today that run some of the biggest companies in the world and its academic staff, are in my humble opinion world class. Their ability to both challenge and support the students, to get the best out of the student when they are there, but also to be part of the story and their journey after they leave, is something very special."

A regular visitor to the UL campus when in the country, John says that staying connected with some of his former tutors and professors and dean allows him to "always come away with ideas - some of which are seeds and can take years to grow and blossom, but something that should never be underestimated.

"When you peel it all back, it's about the DNA of UL, that passion in the teaching staff who rally around a noble cause of really taking care of the students and making them better people.

"They position students to bring value to the world when they go out into it after their education journey. It is not just about employability because the professors go beyond that. They want the students to be part of building a better world and to own that responsibility. That's profound because there is no single class that teaches that – its osmosis!

"It is the fabric of UL and is evident in the myriad of conversations that former students continue to have with the professors afterwards. For me, I feel like when I walk away that 'I just want to be better' because that is how you are trained at UL and that is how we operate.

"That is why I have so much confidence and pride when I talk about UL and its place in the future."

- *Andrew Carey*

*Pictured: (Above) John S Slattery, (Opposite page) John S Slattery. Picture credit: (Background) iStock*

# COVIDWATCH

## Q&A WITH PROF LIAM GLYNN & DR MIKE O'CALLAGHAN

Since a novel coronavirus first surfaced in the city of Wuhan, China in December 2019, every country and region is struggling to learn how best to react to this unprecedented healthcare emergency. All countries are trying to mount an effective public health response to the virus that minimises the harmful effects of the virus on the health of our populations and the economies of our regions and countries, while trying to protect existing healthcare delivery.

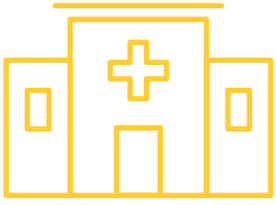
Very early in the outbreak here in Ireland, UL academics Professor Liam Glynn and Dr Mike O'Callaghan, who are also frontline clinicians working in General Practice sought to contribute to the public health response with the founding of **#COVIDWATCHIRL** and more recently **#COVIDWATCHEU** on Twitter and the web. Throughout this crisis, they have continued to deliver care to their practice populations in Ballyvaughan Co Clare and Bruff, Co Limerick, respectively, during what they both agree has been the most challenging time of their clinical careers.

**What is it like to work as GPs in rural Ireland?**

On one hand it is a very beautiful environment to work in and there is a very strong sense of community, but it is also very challenging to deliver healthcare to dispersed populations with high levels of deprivation, many of whom are elderly and vulnerable with complex healthcare needs.

**How did COVID-19 change your daily medical practice?**

COVID-19 changed a lot of things. In the initial phase of the pandemic, we had to move over 90% of our patient contacts to phone/video consultations. We had to dramatically reduce the number of face-to-face contacts to limit risks of transmission of the virus. When we did see our patients, instead of shaking their hands and being able to smile and welcome them, we were wearing masks and in some cases full personal protective equipment (PPE).



General practitioners with the HSE have also been involved in setting up and manning 40 COVID-19 Community Assessment Hubs or "Hot hubs" across the country where we see people who are COVID-19 positive or presumed positive and who are deteriorating in the community, and we decide if they need to go to hospital or if they can continue to be managed at home.

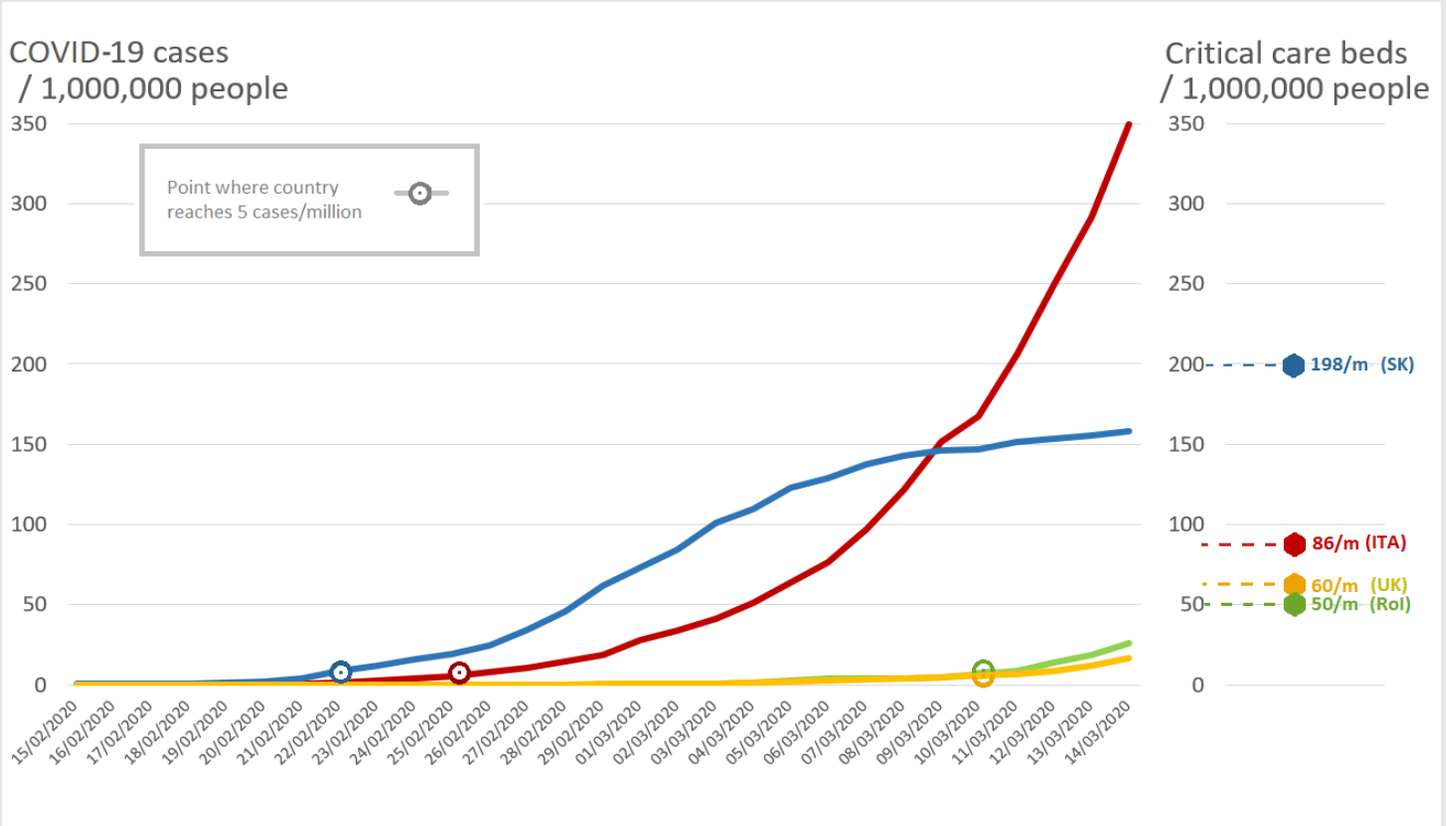
These additional safeguards persist in everyday practice and while necessary, hinder our interactions with patients somewhat. An additional challenge is the backlog of routine care that built up during the previous lockdown while managing new COVID related care.

**So how did the #COVIDWATCHIRL journey start?**

We initially raised the question on whether the Irish trajectory in this pandemic would follow that of Bergamo (northern Italy) or Busan (South Korea). At the time we called for the following key steps to be implemented at scale and effectively in Ireland:

1. An aggressive, transparent and ongoing information campaign to the general public to convey the importance of social distancing and social isolation and thus help to slow the progression of this disease outbreak;
2. Redeployment of healthcare staff and other civil service staff where possible to public health roles such as triage, contact tracing and testing;
3. High volume community based testing, with rapid result communication to better target outbreak clusters;
4. Effective quarantine of infected individuals either at home or in hospital;

**These measures still form the fundamental basis of the response to COVID-19 internationally, as we await a vaccine. >**




ITALY
SOUTH KOREA
Republic of IRELAND
UNITED KINGDOM

COVID-19 deaths by country (as of 14/3/2020)

| | # | #/million | deaths/ 100 cases (%) |
|---|---|---|---|
| ITALY | 1,441 | 23.8 | 6.8% |
| SOUTH KOREA | 72 | 1.4 | 0.9% |
| Republic of IRELAND | 2 | 0.4 | 1.6% |
| UNITED KINGDOM | 21 | 0.3 | 1.8% |

**Sources:** Cases & Deaths: https://www.who.int/emergencies/diseases/novel-coronavirus-2019 (Situation dashboard)
Critical care capacity: National Adult Critical Care Capacity and Activity Census Report 2019 (https://www.hse.ie/eng/about/who/cspd/ncps/critical-care/critical-care-capacity-planning/national-adult-critical-care-capacity-census-2019-report.pdf)
COVID-19 and Italy: what next? Remuzzi A, Remuzzi G. The Lancet. Health Policy- Published online March 12, 2020. [new data- reduces Italy's beds to 86/m from 125/m]
Critical Care In Korea: Present and Future. Lim CM, Kwak SH, Suh GY, Koh Y. J Korean Med Sci. 2015;30(11):1540–1544. doi:10.3346/jkms.2015.30.11.1540
https://www.kingsfund.org.uk/publications/nhs-hospital-bed-numbers (2017 data)

**Note-** we must stress that few patients (~ 5%) with COVID-19 infection will require a critical care bed. However, when cases rise well above critical care bed capacity it may lead to problems when the 5% of patients SEVERELY affected by the disease do need critical care, as "freeing up" critical care beds is no easy task. The contrasting number of deaths between Italy and South Korea provides some evidence in this regard.

> **You have been reporting on the Irish and international cases and deaths of COVID-19 on a Twitter campaign, using #COVIDWATCHIRL. Where was the thinking behind this initiative?**

People are hungry for good data. They want to know what is going on and that the extraordinary sacrifices they are making in terms of COVID-19 is having a positive effect for themselves, their families and for their communities. We are also aware that we are asking people to do incredibly difficult things in terms of social and physical distancing.

So our first purpose was to report fact, not fiction, using reputable open data sources. We wanted to give people clear data about what was going on in Ireland, but also to do some inter-country comparisons so that people would know how we are doing compared to other countries.

And finally, we wanted to try and drive that social change agenda that we feel is so important, because the battle is going to be won and lost in the community and with the actions of each and every individual.

We felt this work was particularly important due to the fact we share the island with Northern Ireland and also because we knew we have low relative numbers of ICU and critical care beds compared to other countries.

>

**What sort of activities has this entailed?**

We published daily comparative data for the first 100 days of the pandemic and then as cases thankfully began to fall we began to publish data weekly. The focus of this endeavour has been to attempt to drive the behavioural change required of our campus community and country to combat COVID-19. We hoped that **#COVIDWATCHIRL** could contribute to driving that behavioural change process in a positive way and ultimately save lives.

While generally the messaging that accompanies our graphs has largely mirrored that of the HSE, we felt there were times where certain elements of the response needed additional attention.


We felt widespread mask-wearing was an important aspect to the public health response in other jurisdictions and we are pleased to see how masks have been widely adopted in Ireland.

The UL website has served as a useful repository for relevant information and the various aspects of the **#COVIDWATCHIRL** campaign we've worked on and we'd like to thank the Marketing and Communications Division of University of Limerick for their support.

**What sort of a response has this had?**

There has been an enormous amount of positive feedback from the campus community and the wider community to this work. In addition, the project has gained a national following with an average of 40,000 impressions on twitter daily for the first 100 days of the pandemic. It has also involved numerous media engagements for the team such as Morning Ireland and Drive time on Radio 1, the RTE Six One News, Primetime, TV3 Tonight Show and a regular weekly slot on Newstalk Breakfast as well as regional radio such as Limerick's own LIVE95 FM, Clare FM and Galway Bay FM. Trying to translate and interpret the data for a lay audience and the media has been a big challenge but a key component of the campaign.

**Any other outcomes related to the project?**

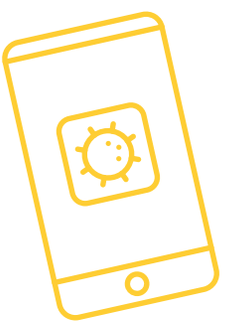
We feel the work has been of benefit in terms of guidance, support and reassurance for members of the campus community and wider community in many different ways. At the same time the team has managed to contribute to several academic publications on the COVID-19 pandemic in Ireland, including a very timely article just published entitled: "The COVID-19 pandemic in Ireland: An overview of the health service and economic policy response".

***Professor Liam Glynn,***
*Is the Professor of General Practice at the University of Limerick School of Medicine as well as a practicing GP in Ballyvaughan, Co Clare.*

***Dr Mike O Callaghan,***
*ICGP/HSE Clinical Research Fellow, School of Medicine, University of Limerick and General Practitioner in Bruff, Co Limerick.*

In addition, Professor Liam Glynn was also appointed clinical lead of the Northern Periphery and Arctic (NPA) COVID-19 Response Group and the team has now been funded by the European Union to internationalise the **#COVIDWATCHIRL** project across a series of Northern European countries. This project will build on the lessons learned in the **#COVIDWATCHIRL** project and will culminate in the launch of a public-facing website where lessons learned from the participating countries can be explored by the general public.

The team also successfully applied for research funding under the COVID-19 Rapid Response umbrella. This has involved collaborating on two SFI-funded projects:



**Firstly**, the **"COVIGILANT"** project focusses on the topic of contact tracing apps led by Dr Jim Buckley from University of Limerick with colleagues from Lero and NUI Galway. Dr Mike O Callaghan is a theme lead and has recently published the results of an online survey taken by over 8,000 participants in May 2020 examining the general public's views on the potential for a COVID contact tracing app.

**Secondly**, having worked in, and contributed to the organisation of the Shannon COVID-19 Community Assessment Hub with Clare GP Dr Marese Mannion and Margaret Costello of the HSE, Professor Glynn is now collaborating on another SFI-funded project led by Professor Ailish McAuliffe from UCD on the role and function of these hubs during the first wave of the pandemic.

**Finally**, the team has also carried out the first seroprevalence study of COVID-19 antibodies in the community in the Mid-West, the results of which are eagerly awaited. This involved 15 General Practice sites across Limerick, Clare and Tipperary and involved nearly 1000 patients and healthcare staff in the community.

As we move into this second phase of the pandemic, it is becoming clear that we need to co-exist with this virus for the foreseeable future. That realisation brings with it new challenges, although the basics of our national approach will need to remain the same. Simple kindness and compassion for our fellow citizens will help us collectively endure the ups and downs of the road ahead. Spending time on self care, outside interests and hobbies will be important if we are to pace ourselves for the marathon ahead. While the challenges for education and healthcare delivery abound, we are an adaptable species and can be proud of the quick pace of change we have managed to implement in the past 6 months. And through science, respectful debate and public health measures, we will endure the next 6 months and beyond as best we can.

- *Andrew Carey*

# ELAINE SECURES EARLY CAREER AWARD

University of Limerick academic Dr Elaine Toomey has received the Stan Maes Early Career award from the European Health Psychology Society (EHPS). Dr Toomey is a Lecturer in the School of Allied Health and a member of the Health Research Institute in UL. The Stan Maes Early Career award recognizes outstanding research excellence, contributions made to the EHPS and/or contributions to professional practice made by EHPS early career members.

Dr Toomey was nominated by Professor Molly Byrne (Director of the Health Behaviour Change Research Group based in the National University of Ireland Galway), for her research and society contributions.

Dr Toomey is an active member of the EHPS since 2016, and has presented her research regularly at the annual conference, as well as participation on conference committees and organisation and delivery of symposia, workshops and roundtable sessions. She is the current Co-chair of the EHPS Open Science Special Interest Group.

Dr Toomey's research predominantly focuses on how we can improve the methodology and transparency of health research to maximise research impact and its implementation into policy and practice. She has particular expertise in health behaviour change interventions, particularly in relation to chronic disease prevention and management. For example, she recently co-led the development of the CHERISH intervention, a childhood obesity prevention intervention focusing on promoting healthy infant feeding behaviours in primary care practice.

She was recently awarded an Applying Research into Policy and Practice Fellowship from the Health Research Board, where she will lead a five year programme of research to explore and enhance the transparency of how research is used in healthcare decision-making in Ireland.

As well as being a lecturer, Dr Toomey is also a Cochrane Ireland Research Associate and a member of the Health Research Institute (University of Limerick) and the Health Behaviour Change Research Group (National University of Ireland Galway). Elaine is a Chartered Physiotherapist and obtained her PhD from University College Dublin and her MSc and BSc from the University of Limerick.

Until April 2020, Elaine was Associate Director of Cochrane Ireland within Evidence Synthesis Ireland and led the implementation of the Evidence Synthesis Ireland Fellowship Scheme. Previously, Elaine was a Health Research Board (HRB) Interdisciplinary Capacity Enhancement Post-doctoral Research Fellow (2016-2019), where she co-led the development of a complex behaviour change childhood obesity prevention intervention, with a specific focus on process and implementation outcomes. Elaine was a Visiting Researcher at Hunter New England Population Health Service/Newcastle University (Newcastle, Australia) in 2018, the Centre for Studies in Family Medicine in Western University (Ontario, Canada) in

"This management team was regularly updated by public health specialists on the evolving situation, and the likely pressures that would be felt across the health system, and it was then able to make decisions accordingly.

"The response that was initiated to support the health of people who were homeless or otherwise marginalised in Limerick city during the Covid-19 pandemic was no less enthusiastic. Firstly, a rapid and flexible approach to Covid-19 testing was adopted. For cases where vulnerable people needed testing, we quickly went out in to the hostels, halting sites, clinics or other settings that they were familiar with.

- *Andrew Carey*

# LIMERICK – LET'S TALK ABOUT OUR MAYOR!

Professor Maura Adshead, Head of UL Engagement and Associate Professor of Politics, reflects on UL's engagement with Limerick City and County Council to change the face of local government in Ireland

*Picture credit: iStock*

> "As someone who is interested in demonstrating the excellent value for money that Irish Higher Education provides, this was a lovely opportunity to show the positive impact that partnering with UL can achieve"

On May 24th, 2019, Limerick was the first – and so far, the only – county in Ireland to establish a directly elected Mayor with executive functions. On foot of the result, the Minister of State for Local Government and Electoral Reform, John Paul Phelan TD, created an Implementation Advisory Group (IAG), comprised of representatives from across the social, economic and political spectrum in Limerick, to advise the Minister on how best to establish and shape the role of directly elected Mayor in Limerick. The Group agreed that in order to ensure maximum support and buy-in for the new Mayoral role, a consultation process should be conducted to allow all stakeholders, including the citizens of Limerick City and County to contribute to the definition of a Directly Elected Mayor with Executive Functions. In January 2020, the IAG and senior officials in the Department of Housing, Planning and Local Government, reached out to UL to see if we could help.

Arguably, my twin research interests in Irish politics and citizen engagement seemed a perfect fit for the challenge. But overall, this was a wonderful opportunity for UL too. In February, I was appointed as Head of UL Engagement and able to kick-start the new role with a creative partnership with Limerick Council, giving a perfect demonstration of how UL engagement can support Limerick innovation. As someone who is interested in demonstrating the excellent value for money that Irish Higher Education provides, this was a lovely opportunity to show the positive impact that partnering with UL can achieve. More selfishly, what professor of politics doesn't want to be involved in initiatives that support democratic practice and encourage people to take an interest in politics? All in all, this seemed like the perfect opportunity to demonstrate the potential for partnerships with UL.

I might have eaten my words: the pandemic was about to prove the power of partnership in ways that I had never imagined.

Our original plan for the consultation was to work with established and trusted local organisations and associations, who would share their networks, to help us to promote a series of 'community conversations' about the new Mayor. We would provide facilitation training and resources to encourage and record the participation, and in doing so enable a series of locally hosted consultations across the county. Using this common approach, we would gather all the feedback into a peoples' report on the new mayoral role. The report needed to be completed by the summer if it was to be considered in subsequent legislation establishing the position.

Essentially, the timeframe for our consultation coincided exactly with the outbreak of COVID-19 and all the restrictions that this entailed. Rather than abandon the consultation process, we were challenged to re-imagine and re-configure it for a move online in lockdown. Writing this piece in week two of the UL term, I think it's safe to say that we now all know that the cliché is a truism: the impossible we do at once – it's only the miracles that take a little longer! My summer crash course in online facilitation only foreshadowed what every lecturer and tutor is now doing as a matter of course in UL. >

"Writing this piece in week two of the UL term, I think it's safe to say that we now all know that the cliché is a truism: the impossible we do at once – it's only the miracles that take a little longer!"

> And for this reason, it would be ridiculous to boast about all the things I've learned to do online. What I would like to crow about, is the wonderful support that I received throughout the summer from colleagues inside and outside UL and from community partners old and new. I never once contacted anyone for help without receiving an immediate and positive response.

Because of the extremely tight timeframe for consultation—and the constraints of working in COVID-19 isolation, our design team was small and comprised of existing collaborative partners who had all worked together before on various community engaged initiatives. In addition to the UL engagement team and VPAASE office, we were supported by UL's K4C mentors*; Limerick Youth Services; the Limerick Public Participation Network; and our collaborative partners in SME, e-Townz.

Together, we built a website, designed explanatory videos and cartoons, and created survey materials for use online and offline. We hosted 21 facilitated community conversations online ourselves and provided the resources and toolkits for groups to host their own conversation with family or friends. In total 927 people from Limerick city and county participated, providing a robust evidence base for the report that we delivered to the IAG and Department of Housing, Planning and Local Government. You can find it all on the Limerick Council website: ourmayor.limerick.ie

I'm still stuck in the attic and I can't lie, I'm getting a bit fed up with it now. But I know I'm not alone. I work with the best of colleagues from all across the university. UL Engagement is not about one programme or project or initiative, it's about a culture and ethos of collaboration and commitment. The Limerick Mayor project showed me how much we can do – even from an attic. I don't doubt, that in spite of COVID-19, we'll all do a whole lot more before this virus is done with us.

- *Professor Maura Adshead*

* The 'Knowledge for Change' (K4C) network is a UNESCO sponsored global network of K4C trained Community Based Participatory Researchers. In 2019, UL was designated as the only UNESCO K4C hub in Ireland.

# NEW RESEARCH IMPACT CASE STUDY: *'WHO SPEAKS FOR WHOM AT WORK?'*

**Through a body of research involving international collaborators, Professor Tony Dundon has provided research evidence on new processes and forms of worker voice that can enhance decent work goals, expose labour market inequalities, and support collaborative employment partnerships. The research questions unequal power relationships, the effects of corporate restructuring and the persistent inequity of neo-liberal orthodoxy.**

Over the last few decades academic research has often neglected issues of power and influence concerning labour market institutions, employment regulation, models of collaborative partnership between workers, unions and employers, and systems for inclusion and wider stakeholder voice.

The research in this impact case study was undertaken with policymakers, consultancies, employers, employer associations, trade unions, HR managers, workers, and shop stewards and non-union employee representatives and extends over a decade of collaborative scholarship.

First, the research impacted employee voices at work for different labour market agents. For example, Professor Dundon highlights that the research results helped community and voluntary NGOs in Ireland to enhance labour market inclusion and social partnership, while similar research projects led by Professor Dundon uncovered innovative union bargaining tactics in the manufacturing sector in Ireland during times of recent austerity. These added new insight about tactics to uplift workers' wage in some areas.

"Further evidence contributed to debates about the multiple meanings and purposes of employee voice, charting how simultaneous and overlapping voice channels can coexist, some of which challenge vested employer interests while others undermine worker influence. Data helped to redefine employee voice within the context of vested interests, which included knowledge as to why some anti-union employers deployed practices to avoid bargaining and trade union recognition, and thereby diminish worker voices.

> "Further evidence contributed to debates about the multiple meanings and purposes of employee voice, charting how simultaneous and overlapping voice channels can coexist, some of which challenge vested employer interests while others undermine worker influence
>
> - *Professor Tony Dundon*

"The research around voice impacts also included newer issues to unpick fairer voice practices, new technologies and gig work related to the applications of equality, such as representative participation and informal social dialogue. These impacts connected with new learning curricula developed from the research by SIPTU's Education College. Further, at workplace levels, examples in both Medtronic and Bank of China reported "noticeable organisational benefits in terms of mutual gains and reciprocity" and "positive working cultures and improved work-life balance".

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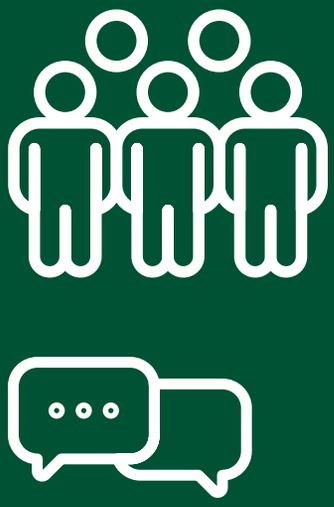


> "The second impact contribution is in relation to the transposition of employee information and consultation (I&C) regulations across European levels, addressing research gaps about how organisations respond to new employment regulations across different sovereign jurisdictions. The research positioned how employer's capture regulatory power and constrain workers from triggering their legitimate rights for voice.

Reported influences of the research include how the work of the Equality and Human Rights Commission (EHRC), Britain's national equality body, shaped government reports around equity access to voice and participation".

In addition, from continuing collaborations with co-researchers from the Work & Equalities Institute at the University of Manchester, Professor Dundon was invited to present research impacts to a UK House of Commons Select Committee in 2019 on new technologies and artificial intelligence. This policy area of Dundon's research had a direct influence on the Chartered Institute of Personnel and Development (CIPD) national 'Working Lives Survey, with new questions added to its survey instrument form the results of the research. The CIPD is the leading professional body for HR practitioners in the UK and Ireland (and worldwide), with over 150,000 members.

Thirdly, according to Professor Dundon, "it has impacted labour market reforms for enhanced collective bargaining, work skills and work futures. Some of these impacts include strategies adopted by the Irish Congress of Trade Unions (ICTU) for organising and mobilising union and members under conditions of austerity".

Related labour market policy impacts includes contributions to restructuring Ireland's apprenticeship scheme, with the Minister of State confirming that Professor Dundon's research has had a positive influence in "supporting the country's competitiveness through positive labour market activation", with new skills and training opportunities for both younger people and more women especially.

Concluding, Professor Dundon says that "overall, the three broad research impact areas are substantial, combining several projects, spanning over a decade of research around the coherent theme of voice and influence at work. Importantly, the research has a focus on neglected actors and groups in the labour market. >

> "It has impacted labour market reforms for enhanced collective bargaining, work skills and work futures. Some of these impacts include strategies adopted by the Irish Congress of Trade Unions (ICTU) for organising and mobilising union and members under conditions of austerity

*- Professor Tony Dundon*

Indeed, university business school research can often relate exclusively to corporate interests, rather than wider societal organisational concerns.

"While corporations and business school researchers pride themselves on cost-cutting efficiencies and presumed corporate savings, the research in this impact case report takes an altogether different angle by considering issues affecting communities who encounter labour market polarisation, work fragmentation and unequal power due to such corporate restructuring and neo-liberal orthodoxies.

Therefore, what research is about and whom it involves are, for impact, important human facets for equity and justice that the impact case illuminates".

*- Andrew Carey*

**The full details of the impact case can be found at https://www.ul.ie/research/who-speaks-whom-work-worker-voice-and-social-dialogue**

*Tony Dundon is Professor of HRM and Employment Relations, Department of Work & Employment Studies, Kemmy Business School.*

# UNIVERSITY PIVOTAL TO EDWARDS LIFESCIENCES COMING TO LIMERICK

Nathan Tenzer says proximity to UL was a 'major consideration' in the medical devices firm's decision to locate a new €160m facility in Castletroy.


A new €160 million facility for medical devices firm Edwards Lifesciences is being built in Castletroy because of the site's 'pivotal' proximity to University of Limerick, according to the man heading it up.

Nathan Tenzer, Plant General Manager at Edwards Lifesciences, says that the site, which will throw open its doors in 2021, was selected over any other because access to UL and its graduates was "a major consideration".

Last year, the firm announced that it was doubling its initial €80 million investment in Castletroy and would complete construction of a major facility by the end of the first quarter of 2021.

The new state-of-the-art facility will see Edwards Lifesciences develop and manufacture sophisticated heart valves and medical devices, and will have 250 employed by the end of the next year, with the staff footprint growing to 600 by the end of 2024.

And Tenzer says that it is the access to a "talent pipeline" of graduates that will be key to the firm achieving its Limerick goals.

Will they all be UL graduates, Links asks?

"Of course, why would we hire from anybody else. It is important that UL knows it was pivotal to where we chose to build in Ireland. It was a major consideration. It actually tipped the scales for us.

"We wanted to have a proximity to UL and build a very close relationship.

"We want to be a premier employer of UL graduates and we want to be one of the companies that says to them, 'if you work really hard, you could end up at a company like Edwards'.

"We want to build this talent pipeline because of the amount of growth I anticipate having within Edwards.

"There are some key tenents to that and it requires a completely different mentality than I think most organisations offer.

"Some organisations are in a 'maintain mindset' – people are hired to do a job and they want them to sit still and do that job.

"I have to build an organisation that is multiplying by orders of magnitude over the next six years and that means having a completely different mind-set to staffing.

"I don't want somebody who is just going to come in to do a job and that is it. They won't be the right fit for us. I want them to grow with us as we can pull staff up through an organisation and we can backfill with new graduates and that is why they are so incredibly important to our organisation," he adds. >

Having now built a relationship with the University, Nathan explains that Edwards is now in its second year of accepting co-op students.

"That is something that we are really excited about because we know the talent that is coming through. If you want to work at Edwards, then the co-op programme is the best way for us to get to know you and for you to get to know us," he explains.

"We want to walk away knowing that that person is someone that we want to be part of our organisation and hope that it is the same for them," he adds.

Nathan explains that the relationship, if suitable, is maintained when the student returns to college and "we stay connected and we tailor that connection to suit all of our needs".

As a participant in the virtual careers fair with dozens of enquires, Nathan says that the process "is a win win for everyone when you look at it."

"This is exactly the way we want to be going and building so that Edwards can be a premier employer in Limerick," he says.

The Californian executive, who has set up home in the Mid West since he took over the role of running the Irish operation two years ago, lives by the famous Abraham Lincoln quote - "The best way to predict the future is to create".

Not alone does he "love" that quote, it is also how he has built the model for the Edwards plant in Limerick.

"You have to know what you are working towards otherwise you are just fumbling in the dark," he outlines.

"You really need to plant a flag and say that this is what our aspirations are and this is what we are moving towards. If you don't do that then you don't have path. And ours is to have an extremely robust talent pipeline and let there be no doubt, UL is key to that.

"Also what is key to that is that any position in Edwards, including mine as GM, can be backfilled with an entry level hire. What I mean is that somebody doesn't come in at the general manager level straight out of college, but it does mean that we have a cascade where we pull people up through the organisation but at the end of that cascade is an entry level position where people can grow within our architecture.

"There is no limit to what you can aspire to even if you start at the bottom.

"We would also like to be able to pull from opportunities globally because opportunities are not limited to these four walls that we are building in Castletroy.

"I know we will be building future plants in Europe and in other global locations because of our growth projections and I want our team here to be at the tip of the sphere where we are looked on as experts. That way we become a very rich pipeline, not only for the company here but also for the company as a whole.

"This isn't a theory, this is how it works because I was actively recruited straight out of college in the US and I am with Edwards for the last 18 years.

"People think that you have to work in a place for three to five years and then jump to the next company and then to the next company just in order to progress and move up.

"Essentially, those are the theories that we have integrated into our organisational development plan – a lot of people think that we are just a factory to build medical devices, but we are also actually a factory to build talented people.

"We have a number of ways to do that and we use rotational programmes to allow people develop new skills and grow. We do this on technical tracks and then on business tracks for the support teams. Our people are our best asset," he adds.

*- Andrew Carey*

*Pictured: Nathan Tenzer*
*Picture credit: True Media*

# UL RESEARCHERS TO GROW FOOD PRODUCTION WITH ZERO CARBON EMISSIONS

A University of Limerick-led research team has designed a self-contained greenhouse that provides its own water and could have a major impact on global food production.

The C-MINUS project brings together partners from industry and academia to address a new disruptive approach to farming – self-contained greenhouses that provide their own water and CO2 powered by sunlight.

"Not only could C-MINUS technology enable decentralised food production, it will do so with a negative carbon footprint," according to Professor Michael Zaworotko, Bernal Chair of Crystal Engineering and Science Foundation of Ireland (SFI) Research Professor at UL's Department of Chemical Sciences, who is leading the project.

"Our goal is to grow food anywhere in the world, at any time, regardless of the environmental conditions – in a self-contained greenhouse, where there is no need for electricity, water, or sunlight," he added.

C-MINUS is a UL-NUIG project in partnership with Molecule RnD, an international think tank, research group and incubator fund that is located at UL.

The project has just successfully progressed to the Seed Phase of the SFI Future Innovator Prizes as part of the Zero Emissions Challenge announced by Minister for Business, Enterprise and Innovation, Heather Humphreys TD.

The project is a collaboration between Professor Zaworotko, Dr David Styles, lecturer in Environmental Engineering at UL and Stellenbosch University Research Chair in Nanostructured Functional Materials, Professor Len Barbour.

"This would be highly disruptive in a positive way were it to succeed and takes advantage of advanced porous materials that have been developed partly through the Molecule water project, and also partly through more basic research funded by the SFI," explained Professor Zaworotko.

"The Future Innovate Prize is aimed at grand challenges, one of which is the programme we are involved in, called the Zero Emissions Challenge. In our case, we took the Zero Emissions one step further, to negative emissions – hence the term C-MINUS, which in the context of carbon is where you want to be," he added.

The C-MINUS team aims to develop low energy carbon capture devices to enable on-site carbon capture and net negative carbon technologies.

It utilises a revolutionary new crystalline material developed by Professor Zaworotko at UL that has favourable properties for absorbing and releasing water from the atmosphere.

UL lecturer David Styles said he was "excited to be involved in C-MINUS, where we will be applying life cycle assessment to benchmark the environmental footprint of food grown in urban and arid locations using revolutionary technology to harvest carbon dioxide and water from air pioneered at UL.

"Ultimately, this technology could have far-reaching consequences for food security whilst sparing land to deliver biodiversity and net zero carbon targets," he added.

Bernal Institute Director, Professor Luuk van der Wielen, said: "The coronavirus pandemic has underlined the importance of distributed, local manufacturing of food, reducing the dependence on global supply chains. >

> This would be highly disruptive in a positive way were it to succeed and takes advantage of advanced porous materials that have been developed partly through the Molecule water project, and also partly through more basic research funded by the SFI

*- Professor Mike Zaworotko*

The grant supports Professor Zaworotko's research group and their partners Stellenbosch University and Molecule, with the fast development of this fully sustainable solution with impact for global food safety, firmly rooted in the structured materials research of the Bernal Institute of the University of Limerick."

Kurt Francis, managing director of Molecule RND LTD, an international think tank, research group and incubator fund that located in UL to work in collaboration with Professor Zaworotko, said: "We are honoured to work with Professor Zaworotko and be chosen as the commercial partner to bring this vital global resilience technology to millions of people."

Professor Charles Spillane, Chair of Plant Science and Director of the Ryan Institute at NUIG, said: "I think we should see carbon negative as a horizon point – and if we can get to carbon neutral on that journey, then we are already succeeding. But it is a destination point that we should be trying to push greenhouse-based horticultural systems towards. If we can achieve that tipping point, from carbon neutral to carbon negative, then we will have done humanity a great service."

Minister Humphreys announced this week that twelve teams have been shortlisted to progress onto the next phase of the SFI Future Innovator Prize. Funded by the Department of Business, Enterprise and Innovation through SFI, this competition is part of an overall government plan to cultivate challenge-based funding in Ireland. The two challenges, the Artificial Intelligence (AI) for Societal Good Challenge and the Zero Emissions Challenge, are run in partnership with the Department of Foreign Affairs and Trade.

Minister Humphreys said: "I am delighted to announce that twelve teams will go forward to the next phase of the Future Innovator Prize competition. These teams are addressing key societal challenges Zero Emissions and Artificial Intelligence for Societal Good. I commend the researchers on their inspiring solution-focused ideas. Now more than ever, we need to ensure that ongoing significant national and global issues including climate change, disease diagnosis and treatment continue to be addressed. Programmes such as the Future Innovator Prize empower our innovators to deliver creative solutions to important issues where we as a society will benefit."

*- Alan Owens*




*Pictured:*
*Professor Mike Zaworotko*
*Picture credit: Alan Place*

*Illustrations:*
*01 - 03 Graphic representations of the self-contained greenhouses that provide its own water supply, designed by the C-MINUS team*

# MEET OUR NEW MARIE CURIE FELLOWS

Despite the disruption of a global pandemic, University of Limerick was able to welcome four new Marie Skłodowska-Curie Fellows in 2020. And for the second year running, a UL candidate achieved the top score and one of only 16 to do so in this competition across Europe. Two of the fellowships will be based in the Faculty of Arts, Humanities and Social Sciences, and two others in the Faculty of Education and Health Sciences. The quality of the candidates applying to work at the university is evidenced in their success rate, where 47% of the University of Limerick proposals received a score of 90% or higher.

**Marie Curie Fellowships have been awarded to:**

**Dr Dino Carpentras***,
Will study the spread of opinions related to vaccine hesitancy using mathematical and computational modelling. Dr Carpentras completed his PhD in Photonics and postdoc at EPFL Lausanne. He will work with Dr Mike Quayle in the Department of Psychology and Prof James Gleeson, Dept of Maths and Statistics.

**Dr Sergi Morales,**
who will study the ethical and political issues faced by linguistically diverse societies with Dr Andrew Shorten, Department of Politics and Public Administration. Dr Morales completed his PhD and postdoc in Philosophy at KU Leuven. Dr Morales achieved a score of 100% for his project, one of only three to do so in the social sciences across Europe.

**Dr Piotr Godzisz**,
Will join the Hate and Hostility Research Group to work on the diffusion of international hate crime norms in EU accession states. He will work with Dr Amanda Haynes (Sociology) and Dr Jennifer Schweppe (Law). Dr Godzisz completed his PhD in Criminology at University College London and will join UL from Birmingham City University.

**Dr Lucia Mundo**,
Will research the Epstein–Barr virus (EBV) and its role in EBV-driven cancers. Dr Mundo completed her PhD and postdoc in medical biotechnology at the University of Siena and will work with Prof Paul Murray at the Health Research Institute, UL.

**Irish Research Council Postdoctoral Fellowships**
Five Irish Research Council postdoctoral fellowships have been awarded to UL candidates. Of this number, four are female researchers which represents an important milestone for UL. **The awardees are:**

**Dr Rachel Sheehan,**
Will join the Irish Rugby Injury Surveillance Project to investigate the psychological factors associated with injury in rugby. She will work with Drs Ian Kenny and Tom Comyns (PESS). Rachel completed her PhD at UL, where she examined the motivation and mental health of elite athletes.

**Dr Olwyn Mahon,**
Will research cancer and immune cell behaviour in the tumour microenvironment using 3D bioprinted models of colonic tumours. Dr Mahon completed her PhD in immunology and tissue engineering at Trinity College Dublin and will work with Drs. Patrick Kiely and Kieran McGourty at the Health Research Institute, UL in collaboration with Prof Danny Kelly at The Trinity Centre for Biomedical Engineering, TCD.'

**Dr Angelika Holzinger**
Will join Dr Micheál Scanlon's group in the Bernal Institute. She will work on the electrochemical synthesis and state-of-the-art characterization of a novel ultrathin hybrid nanocomposite (consisting of a conductive polymer with embedded nanoparticles) for applications in sensor and polymer solar cell technology. Angelika completed her PhD in Analytical Chemistry at Ulm University in Germany.

***Dr Dino Carpentras**
Accepted a MSCA fellowship at UL, see above and Dr Ananya Patra departed UL to accept a position in Israel. We extend a warm welcome to all our fellows.

# A NEAR DEATH EXPERIENCE LED PADRAIC BACK TO THE RIGHT PATH OF GIVING

At 29, Padraic Rocliffe's career pathway has been diverse, mostly underpinned by three broad themes of physical activity, giving back to those who need it most and mental health.

As a PhD student, Physical Education and English Teacher at UL, the founder of Shine a Light, swim coach, keynote speaker and physical activity co-ordinator, Padraic says that each theme is fluid allowing one to comfortably intersect and inform another.

However, it is Padraic's story to date that is more remarkable than his list of accolades.

From an early age, sport in many forms was central to Padraic's life and he thrived on it. Football, boxing and swimming laps, were all part of the early interactions, but Padraic explains that "once realizing my true potential in the water, my swimming career became a priority and quickly grew to six water and two land-based sessions weekly."

"I enjoyed many fruitful experiences in the water and at competition level where I had the privilege of representing my club, province and country at national and international level."

Fast forward through third level programs in UCD and a Bachelor of Science in Physical Education and English Teaching at UL, and Padraic was subsequently offered a PhD which commenced in January 2020, "marking another significant step in my journey to becoming an excellent research scientist in the area of translating the value of physical activity to the wider population."

However in 2017, Padraic founded Shine a Light, "a charity that was founded on the back of a near death experience in August 2016 which lead to a conversation with two homeless people whom I was providing food for on Christmas Day in Las Vegas. It turned out they had been evicted from their home, were unable to pay their bills and had fallen a victim of society over there and were subsequently sleeping in the sewers. "What's worse they were mother and son. This was a story that touched my heart and along with the ever-growing homeless problem that affects nearly 11,000 people nationally and at least 150 million globally, gave me the inspiration to set up Shine a Light."

Padraic's near death experience – probably couldn't be more dramatic.

August 2016, midway through his undergraduate degree in UL and Padraic, while on exchange programme in California, was involved in a car crash in the heart of Death Valley.

"God spoke to me, telling me to stay in the car until help arrived. I subsequently avoided paralysation even with a broken neck, back and foot. I was airlifted to a trauma centre in Las Vegas where I was bed bound for some time and ultimately spent the next year in recovery, learning to walk amongst a variety of other fundamental movements we take for granted daily.

"Many of the skills I learnt in the water such as discipline and commitment resurfaced and were transferable directly to my recovery. Ultimately the car crash was the best thing that's ever happened to me as it has altered the lens and perspective with which I choose to view life and has almost certainly rechannelled my energy in to giving back to those who need it most, while sharing my experiences along the way.

"Often traits of personal improvement or accomplishment are as a direct result of trauma. For me this is underpinned by three broad themes; depression, addiction and rehabilitation."

At various times, Padraic faced challenges, both personal, emotional and speaks about depression and his mental health in a bid to help reduce the stigmas attached.

He has also dealt with periods of addiction in his life, often accompanied by the odd brush with authorities.

Overcoming them however, "ingrained within me a zest for life that is underpinned by my integrity, commitment, consistency, and desire to be the ultimate and best version of myself while giving back to those who need it most."

To that end, Padraic's work with the charity allows for "a coordination of campaigns that provide the homeless with Shine a Light care packs including clothing, food, liquids, and hygiene products. Furthermore, we educate schools, universities, and organizations on overcoming adversity and giving back to those who need it most through my story.

"Other areas of focus align with social interaction through our initiative 'Chat and a cuppa', which encourages conversations between volunteers and the homeless as building a social connection has been proven to have a positive psychological process in the brain.

"There is a correlation between mental health and homelessness be it depression, anxiety or bi-polar, while the progressive psychological deterioration resulting from dependency on a substance such as alcohol and drugs is often reflected in the cities, towns and streets the length and breadth of Ireland.

"Evidence suggests that mental illness underpins many of these people's issues and as such, the implementation of physical activity and awareness of its benefits such as on wellbeing has become a cornerstone of the organisation. My career not only involves giving back to those who need it most nationally but internationally", Padraic concluded - *Andrew Carey*

**Padraic won the Young Outstanding Person of Ireland earlier this year and was nominated to represent Ireland for the Young Outstanding Person of the World at the 2020 Junior Chamber International, World Congress, Yokohama, Japan.**

# COVID ON THE FRINGES OF SOCIETY

When the COVID-19 pandemic unfolded across the world at the start of 2020, it was clear to see that the virus had no regard for geography, class or distinction. Land borders were ignored as COVID freely travelled without limitations and from the affluent to the marginalised, everyone was susceptible to the illness. Despite increasing pressures on the health system, most of those affected had access to the care they needed. However, there was a cohort of those on the fringes without the same access to supports.

Dr Patrick O'Donnell is a general practitioner and a member of the Irish College of General Practitioners but is also a member of the Public and Patient Involvement Research Unit at University of Limerick with expertise in participatory health research with socially excluded communities.

With an interest in the delivery of primary care in areas of deprivation and to marginalised groups, Dr O'Donnell explains what it was like for people on the fringes of society who were dealing with COVID.

"Mid-March 2020 was a time of huge uncertainty and fear for many people across the country with the arrival of the COVID-19 pandemic. The whole Irish population was asked to prepare for an unprecedented challenge, and most of the focus was on people being able to protect themselves by staying at home and staying informed. For some people on the margins of society, those simple requests were not so easy to follow. In terms of the health system response to this pandemic, GPs in their thousands across Ireland began attending weekly webinars to update them on topics such as infection control, COVID-19 testing and palliative care of people in the community.

"Guidelines and referral pathways for people suspected of having COVID-19 were changing at an extraordinary rate in response to new knowledge gained on this virus at home and abroad. In the Mid-West, a CHO3 Area Crisis Management Team was established to plan and coordinate activities relating to the virus across the hospital and primary care services.

"This management team was regularly updated by public health specialists on the evolving situation, and the likely pressures that would be felt across the health system, and it was then able to make decisions accordingly.

"The response that was initiated to support the health of people who were homeless or otherwise marginalised in Limerick city during the COVID-19 pandemic was no less enthusiastic," he adds. Dr O'Donnell explains that firstly, a rapid and flexible approach to COVID-19 testing was adopted. For cases where vulnerable people needed testing, we quickly went out in to the hostels, halting sites, clinics or other settings that they were familiar with.

*Pictured: Dr Patrick O'Donnell*

In addition, a multi-agency group of stakeholders was quickly convened to develop supported isolation facilities for vulnerable people in the city.

"These were individuals who were awaiting testing, awaiting results or who had been diagnosed with COVID-19. Representatives of Limerick City Council, Safetynet Primary Care, Mid-West Simon and the Ana Liffey Drug Project came together with HSE Social Inclusion, Primary Care and Public Health staff to plan the response. In the months that followed, we supported many people who were rough sleeping, people with addiction, people who were undocumented migrants, people from direct provision and others to isolate in a supportive setting where their health could be effectively monitored.

"Now more than six months on, both of these measures are still running and able to respond to the changing trends in the spread of COVID-19. The success of these measures is down to the collaboration across services and the pragmatic approach adopted by all in the face of this unprecedented challenge," adds the Limerick native.

Dr Patrick O'Donnell has been advising HSE Social Inclusion on the COVID-19 testing and supported isolation of people from marginalised groups across the Mid-West. He has also been acting as a member of the HSE CHO3 Area Crisis Management Team since the beginning of the Covid-19 Pandemic.

The Clinical Fellowship in Social Inclusion post he holds at UL School of Medicine was developed by the Partnership for Health Equity which is led by Professor Anne MacFarlane of UL School of Medicine, Dr Austin O'Carroll GP of the North Dublin City GP Training scheme and the HSE Social Inclusion Unit. The aim of this partnership is to advocate for evidence based primary healthcare for all, with a focus on typically marginalised groups in society.

A graduate of UCD, Dr O'Donnell also holds a Masters Degree in Global Health from Trinity College. Patrick's main research interests are in Health Equity, Primary Care for Marginalised Groups and Medical Student Electives. - *Andrew Carey*

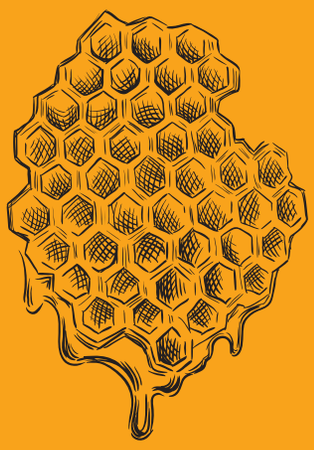
# UNIVERSITY OF LIMERICK GRADUATE WINS JAMES DYSON AWARD FOR UNIQUE BEEHIVE DESIGN

A RECENT University of Limerick graduate has won the prestigious national James Dyson Award for 2020.

22-year-old Niamh Damery won the award for her Econoc design – a digital hive made for conserving wild native endangered Irish Black Bees.

Niamh, who graduated from Product Design at UL in August, has attempted to solve the problem of the declining population of the native Irish Black Bee by harnessing natural materials to create a conservation hive.

On winning the James Dyson Award, Cork native Niamh said: "I entered into the award because I know James Dyson's ethos and I think he's an amazing designer. As designers I think we have the power to make both big and small changes but also make changes in people's mindsets with what we design and how we design it.



"This is what motivates me as a designer, and it's amazing to receive the recognition of such a prestigious design award."

Barry Sheehan, Head of Design at Technological University Dublin and judge on this year's panel said: "We were unanimously drawn to Niamh's creative innovation around this urgent issue of the declining bee population in Ireland.

"In the current climate people are spending more time outside and in gardens, and the Econooc demonstrates the crucial role that design plays in a sustainable future and the survival of Irish Black Bees."

Winning the national leg of the James Dyson Award will inject €2,000 into Niamh's project, which she aims to invest into advanced prototyping and further research. Niamh also progressed to the international stage of the James Dyson Award, which was due to take place on November 19. Her design was shortlisted among the top 20 for the overall award.

With experts estimating that a third of all bees could be extinct by 2030, which would cause a major crisis for wildlife and horticulture as they are the most effective pollinators and will take many of our flowering plants, fruits and birds with them, Niamh's design aims to combat the issue by creating a mycelium hive which biomimics the shape of a tree hollow, the perfect shape for bees to move around in a cluster during the winter months.

The base is made from mycelium, which is grown from mushrooms and acts as a binding agent when grown on a substrate. This can be any agricultural bi product that would normally end up as waste.

*Pictured: UL Product Design graduate Niamh Damery, who won the national James Dyson award for her beehive design*

Mycelium is similar to polystyrene and also has natural substances that can give the bees an extra defence against the varroa mite which can carry viruses into a hive. The Econooc is a segmented self-assembly hive, which makes it smaller to transport, and easier to grow and repair.

The bottom remoulded waste plastic landing pad and ventilation hole allows people to watch the bees inside the hive. The Econooc also comes with a calendar that teaches the user about biodiversity and how to create a more diverse garden. The lower section of the calendar is made from wildflower seeded paper which the user can plant.

She explained: "Although bees are so small, they play a huge such a huge role in nature and the environment all around us.

"My Dad kept bees, as did my Grandfather before him, and I've always been surrounded by bees and had a love for them. With the commercialisation of beekeeping, many are importing other strains of bees which are breeding with the Irish Black Bee, and these strains are not able to survive in the Irish weather as well as the Black Bee. This is leading to population decline of honeybees in Ireland.

"Through talking to people and through my research I was shocked to find out that so many of of us, both young and old, didn't know that much about biodiversity. I hope the Econooc will encourage more people to think about nature and solutions we can implement to ensure the survival of bees in the future."

This year marked the 16th year of the James Dyson Award, and the 16th year of championing ground-breaking concepts in engineering and design. This year, the award has also seen its highest number of entrants in the Award's history across all 27 participating nations. - *Alan Owens*

# WORKING IN THE FIELD

## UL's Allied Health students get first-hand experience as they engage in internationally recommended Interprofessional Education at the on-campus Intermediate Care Facility

Interprofessional Education (IPE) is changing the way healthcare education is being provided. The World Health Organisation (WHO) has identified IPE, as an innovative strategy to address current complex challenges in healthcare.

IPE is described by the WHO as students from two or more professions learning from, with, and about each other to enable effective collaboration and to improve health outcomes. IPE prepares graduates to work collaboratively in healthcare teams and is now advocated by the WHO as a necessary step in the training of a future health workforce, which is ready for collaborative practice.

University of Limerick School of Allied Health features IPE as a key step in improving care to patients with complex needs and promoting sustainable healthcare systems.

It is evidenced throughout teaching, practice education placements and research. The UL School of Allied Health has received a major, national level, DELTA award for excellence in IPE in Irish Higher Education teaching. UL is leading Irish Higher Education Institutions in implementing practice-based IPE, where students work and learn together at the same site. Innovative collaborations between University of Limerick and UL Hospitals Group led to the development of the Intermediate Care Facility (ICF). This has afforded a unique IPE opportunity for UL students.

Since its inception at the UL Arena in June 2020, the UL Hospitals Group ICF, a fully-staffed 68-bed hospital facility, provided care to patients, fit for discharge from acute hospitals, who may benefit from additional rehabilitation during the COVID-19 pandemic. Physiotherapy, Speech and Language Therapy, Occupational Therapy and Human Nutrition & Dietetics students from the School of Allied Health were co-located for practice placements in the ICF.

Health and Social Care Professionals headed by Fiona Steed (Group Lead, Allied Health, UL Hospitals) and UL Practice Tutors from the School of Allied Health, worked collaboratively to facilitate student placements. Yvonne Young (Nursing Lead at the ICF) supported UL Nursing and Medicine students working as Health Care Assistants and with Patient Advocacy Liaison Services (PALS) to engage with on-site IPE.

Professor Kerstin Mey, President of the University of Limerick also contributed to this collaborative effort, elevating the status of IPE across campus. Funding for an Interprofessional Practice Tutor was provided through the UL Meitheal Project, which advances university-community engagement. The post of Interprofessional Practice Tutor is the first of its kind within Irish Higher Education, and a pioneering role internationally.

Jimmy Burke, UL Interprofessional Practice Tutor, has facilitated practice-based IPE on-site and on-line for students at the ICF. The response of students to their interprofessional learning experience at the ICF has been extremely positive.

> "The collaborative assignments each week encouraged students of different allied health disciplines to work closely together and communicate with one another. This improved not only our learning, but the care we were able to provide to patients"
>
> - *Ashley Booth, MSc Occupational Therapy*

Students evidenced their new understandings through presentations to the ICF care team, where one student stated that this interprofessional, collaborative approach practiced in the ICF, "This is our new baseline".

Practice-based IPE is supported by recent research to be effective in improving students understanding of roles within the healthcare team, enhancing interprofessional communication and providing experience of interprofessional collaboration. It is widely accepted that this team-orientated, collaborative approach to patient care improves patient outcomes. UL has evidenced its continuing commitment to IPE with the establishment of an IPE Module Co-Ordinator, Dr Anne Griffin, (Lecturer in Nutrition & Dietetics) at the School of Allied Health. UL is now positioned to lead the field internationally in IPE research with a comprehensive research study into the novel ICF being led by Dr Judi Pettigrew (Associate Professor in Occupational Therapy) from the UL School of Allied Health.

A significant quote relating to the COVID-19 era is from Kiran Mazumdar-Shaw, who stated "Ultimately, the greatest lesson that COVID-19 can teach humanity is that we are all in this together." This sentiment is reflected in the collaboration to support the ICF and a new baseline for Interprofessional Education at UL. The following responses illustrate the student experience of IPE in the ICF:

Nicole O'Callaghan, a MSc Speech & Language Therapy student said: "As an SLT student on my final placement, engaging in IPE in the ICF has been one of many highlights of my student experience.

>

> IPE not only reinforced my understanding of the importance of collaboration, but empowered me in adapting my practice to become more holistic and patient-centred".

Ashley Booth, studying for an MSc in Occupational Therapy notes that "the collaborative assignments each week encouraged students of different allied health disciplines to work closely together and communicate with one another. This improved not only our learning, but the care we were able to provide to patients".

Cormac O'Hanlon studying for a BSc in Physiotherapy said that he "found the IPE sessions very beneficial for my learning as they allowed me to develop new rapports with other Allied Health Professions and make the patient experience as holistic and collaborative as possible".

Marguerite Corby who is studying for a MSc in Human Nutrition & Dietetics said that she "felt that it was a fantastic idea and ensured that all of the students had the ability to work and communicate as part of a multi-disciplinary team and take into consideration each other's roles in the care and treatment of the patients. I hope to take my experience from the ICF with me as I continue my placement in University Hospital Limerick and beyond and try and incorporate what I learned into everyday practice". - *Andrew Carey*

*Pictured: Intermediate Care Facility.*
*Picture credits: True Media & School of Allied Health*

During the five months it operated at UL Arena, the Intermediate Care Facility (ICF) operated by the UL Hospitals Group, provided rehabilitation for 188 between June 8 and October 23. With rostered cover 24 hours a day, the ICF care facility utilised a workforce of some 70 UL Hospitals Group personnel, including consultant physicians, non-consultant hospital doctors (NCHDs), an assistant director of nursing, The multi-faceted Allied Health team included Clinical Nutrition & Dietetics, Medical Social Work, Occupational Therapy, Physiotherapy and Speech & Language Therapy, supported by students of Clinical Nutrition & Dietetics, Physiotherapy and Speech & Language Therapy from UL.

Nursing staff were supported by Health Care Assistants including UL medical and nursing students, Clinical Nurse Managers, and a wider network of support staff.

UL President, Professor Kerstin May said: "We have a very significant and valuable partnership with University Hospital Limerick as well as a strong commitment to our Mid-West community. The Intermediate Care Facility at UL was an example of a very collaborative multi organisational solution to serve our community at an anxious and difficult time. Our students in many health disciplines had opportunities to experience excellent practice-based education and inter-professional collaboration at the facility and to be involved in giving care to patients with complex needs."


## *'A MAGICAL ASSOCIATION WITH AN AMAZING UNIVERSITY'* DR NIAMH NICGHABHANN SPEAKS TO LORETTA BRENNAN GLUCKSMAN, OUTGOING CHAIR OF THE UNIVERSITY OF LIMERICK FOUNDATION

# *'I read, I write, therefore all life is near'*

These are the closing lines of the double sonnet 'In the Library' by Mary O'Malley and Martin Dyar, which was commissioned to mark the opening of the Glucksman Library extension at University of Limerick in summer 2018. Those present will remember the day – the sunlight streaming in through the glass, the necessary pomp and circumstance of speeches and unveilings, and the genuine admiration and excitement of all present at the exciting new spaces for learning, reading, thinking, collaboration, conversation and contemplation. The Glucksman Library has long been at the heart of life at UL, from the warm welcome of the café staff to the expert help and support of the librarians and assistants.

With the extension, that heart got bigger, and was welcomed by all.

Now, in late 2020, as we read and write without 'all life' being quite so near, the memory of such an event is coloured by a certain nostalgia. However, that heart is still beating, and the Glucksman Library is working harder than ever to connect staff and students with the ideas and supports that they need, whether they are working on campus or from kitchen tables and bedside desks around the world.

The decision to invest in a university library is a decision to invest in transformation. By all accounts, it is one of the most enduring investments in transformation that could be made – one thinks of the decisions of Sir Thomas Bodley at Oxford, or of Archbishop Narcissus Marsh in Dublin, which have continued to support transformative learning and scholarship throughout the centuries.

While we can no longer sit down and chat to Bodley or Marsh about their experiences and insights, I was lucky enough to be able to have a conversation with someone with first-hand experience of transformation within the university sector – Dr Loretta Brennan Glucksman.

Dr Brennan Glucksman will be well-known to many as Chair of the Board of the UL Foundation, and through her life's work in philanthropy, often focused on establishing strong ties between America and Ireland. We met via Skype, and had a wonderful and wide-ranging conversation for over an hour, and some of this is captured below.

# Q&A

**Niamh NicGhabhann (NNiG):**
Before we begin, I should say my parents met at the University of Limerick so I feel very indebted to UL for existing at all!

**Loretta Brennan Glucksman (LBG):**
You are really a UL girl!

**NNiG:**
I would love to tap into some of your insight and expertise around transformation and education. You and your late husband have made, and you continue to make, such an enormous contribution to Irish educational and cultural institutions. I want to ask first of all, why have culture and education been such a focus of your work over the past years?

**LBG:**
That's a good and very big question. The University of Limerick was the first university that Lew and I visited in the 1980s on a tour of Ireland. Lew was a trustee at NYU, and he was concerned because there were a lot of ethnic study houses at NYU. There were Greek studies, Jewish studies, Spanish studies, French, German, the whole gamut, but there was no centre for Irish studies. Now Lew was a Hungarian Jew, so he had no Irish ethnicity, but that didn't hold him back and I of course was third generation Irish. Both sides of my grandparents came over to the United States from Ireland, so I was deeply embedded in my Irishness. We decided that we would go to Ireland and see if there would be any interest in the academic centres in Ireland for any sort of exchange programs. We went in June 1984, and indeed there was interest. Divine providence, I call I it – we flew into Shannon, and came upon the University of Limerick. Dr Ed Walsh was our wonderful President at that time, and he welcomed us very warmly. That was the beginning of our magical association with an amazing university.

**NNiG:**
As someone who grew up in the vicinity, UL always had that sense of being light on its feet, and being ready to be reactive and responsive to opportunities so it's interesting that you came across them and they came across you, and the rest is history.

>

*Pictured: Then UL President Ed Walsh with former Tanaiste Dick Spring and Lewis and Loretta Brennan Glucksman*
*Picture credit: UL special collections archive*

> In the university system, we offer students the opportunity to spend time thinking about the kind of person they want to be and the kind of impact they want to make, and I think the opportunities that places like the Glucksman and also many environments in the University of Limerick and other universities are central, because the students are not just boxes we're filling up with knowledge but citizens of the world that we are hopefully enabling in the best ways that we can. Can you talk about your sense of Limerick as a city, and its connections with the University?

**LBG:**
I just love Limerick city. I've had a chance to work with wonderful people, including Denis Brosnan, Conn Murray, John Moran, Don Barry, Rose Hynes and others on how to best bridge the moat between town and gown, and have some of the successful aspects of the University and our wonderful Campus benefit the city.

> "We went in June 1984, and indeed there was interest. Divine providence, I call I it – we flew into Shannon, and came upon the University of Limerick. Dr Ed Walsh was our wonderful President at that time, and he welcomed us very warmly. That was the beginning of our magical association with an amazing university"
>
> *- Loretta Brennan Glucksman*

Geographically, they are so close, so lots of wonderful experiments and suggestions were given and a lot of them were acted upon. I know Mary Harney, our wonderful Chancellor, is very intent on that, as are many of our members of the Foundation and business people in the area, including the leaders of Shannon Airport. It is a vision shared by Harry Fehily, into whose exceptionally capable hands I pass the Foundation's Chairmanship. And one more thing - I wanted very much in this conversation with you to mention Chuck Feeney. He has just attained his goal of giving away all his money, $8 billion dollars and Ireland and the University of Limerick have been recipients of that amazing generosity for years, going back to Ed Walsh. Chuck Feeney is a historical figure and I'm so happy that he found Limerick. He came and he changed the world for so many Irish students and indeed for the country of Ireland, so thank you Chuck. >

***Pictured: (Left to Right - this page)*** *Loretta Brennan Glucksman and her husband Lewis at the laying of the foundation stone of the Glucksman library in May 1994*
*Picture credit: UL special collections archive*

***Pictured: (Top Left - opposite page)*** *Former UL Foundation CEO David Cronin with Loretta and former UL President Professor Don Barry*
*Picture credit: Alan Place*

**NNiG:** Absolutely, and I think for someone who grew up in Limerick and around UL, it was like magic to see it suddenly rise up. I will never forget walking into the Foundation building and to the Concert Hall for the first time and being brought to concerts there and just thinking this is so enormous, how did this arrive on my doorstep in Limerick?! I want to ask one final question. What are your hopes and dreams for UL going forward in the next 20 or 50 years, what do you hope the University of Limerick goes on to do and become?

**LBG:** Well, that's one of those wonderful questions because it you can make it whatever size that you want, but I would like to hope that the University of Limerick is allowed to fulfil the mission that was perceived when a band of very eager, talented people got together and said this is necessary and it will be beneficial. I think paramount to that is being true to the vision of connecting the Library with the city, of being in the City and there are facets of the university all around you, of being on the campus and there are aspects of the City all around you and to have that flow.

> "I think paramount to that is being true to the vision of connecting the Library with the city, of being in the City and there are facets of the university all around you, of being on the campus and there are aspects of the City all around you and to have that flow"
>
> *- Loretta Brennan Glucksman*

I think that's the first thing I would pray for in the future of the University and of the City of Limerick, that we realise that promise of melding the benefits of both to the strength of both and indeed to the alleviation of the problems of both. If that can happen, I think that would be the culmination of the dreams of so many wondrous people.

**NNiG:** Our time is up, but in the course of our conversation, you've mentioned many dinners and parties throughout your time in Ireland. I have to ask – what is your party piece?

**LBG:** I don't have a terrific voice, but boy do I know the words! I have so many favourites I'm not even sure I could name one, Parting Glass comes to mind, and then I also like to use American songs like Yankee Doodle Dandy. My favourite story of a singsong is Lew who had no idea of tone to say the least and had no interest in it. His interest was in stories and facts so he came up with a party piece that he would challenge people to name the collective noun of a species so a Gaggle of Geese and a this of that, and it was so infectious. >

***Pictured: (Left & Above)*** *Loretta Brennan Glucksman, centre, with UL Vice President Academic Affairs & Student Engagement Prof Kerstin Mey, Dr Miriam Nyhan Grey, NYU, UL President Dr Des Fitzgerald and UL Chancellor Mary Harney, on the occasion of receiving her honorary doctorate from UL in New York in November 2019*
*Picture credit: James Higgins Photography NYC*

**NNiG:** As long as everybody has their party piece, that's always the main thing! It is lovely to end our interview remembering your late husband, because it's very evident that all of the work brings his memory and his life with it too and we all very much remember and appreciate those efforts, and the thought and passion and time that your family has so generously given to our region and our university.

**LBG:** Niamh, we always feel, Lew and I, that we have always been by a huge margin the beneficiaries of our whole experience in Ireland.
We have benefitted so beautifully and deeply from our experiences in that magical country from all the people and all the good that has come and will come so we always felt that the ledger was very, very stacked. We took more than we ever gave so that's a lovely experience to have. I thank you so much for this, you ask very good questions that elicited so many wonderful memories so I thank you for that and I hope I get to meet you whenever God allows us to really be together again.

****This is an edited version of the conversation – the full interview is available online at www.ul.ie/ullinks**

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> *- Loretta Brennan Glucksman*

*Interview by:*
***Dr Niamh NicGhabhann***
*Assistant Dean, Research for the Faculty of Arts, Humanities and Social Sciences, and lecturer in the Department of History, UL*

# MA COURSE ALLOWS MUSICIANS CONNECT WITH OTHERS THROUGH THEIR ART

The MA in Classical String Performance at the Irish World Academy of Music and Dance is unique in many ways. It's founded on the relationship between the Irish Chamber Orchestra - one of the Ireland's premier professional ensembles - and the Irish World Academy - another of Ireland's artistic jewels.

The ICO has been resident at the Academy since 1995 and the MA course was born shortly afterwards as a way to harness the energy of the new relationship and use it to create the next generation of professional classical musicians.

The violinist and chamber musician Dr Diane Daly is the course director for the MA and explains that "In recent years the course has developed an international reputation not only for artistic excellence, but for adopting a 'whole musician' approach that goes beyond technical excellence to also focus on body awareness and emotional intention.

"The result is to create musicians not only adept at playing their instruments at the highest level, but also musicians who can fully express themselves and connect with others through their art.

"The strength of this reputation can be seen from the international make-up of the current course cohort commencing September 2020. The 12 musicians who passed the stringent audition process travelled to Limerick from Mexico, Hungary, the USA, Estonia, Italy, Paraguay, the UK, Italy, the Ukraine, Croatia, Denmark and Austria.

"This demonstrates the MA in Classical String performance as truly a leader in establishing University of Limerick as an international centre of excellence in its field.

How the course is experienced is best captured by those experiencing it.

Dr Daly harvested these reflections from the current cohort, written after week one this semester.

"The UL campus in the early hours has an air of anticipation at the moment, as one might imagine a place on the brink of waking up. On the frostier mornings, a sleepy mist lingers over the Shannon, shrouding a silhouetted cormorant who poses grandly for our view from the Living Bridge; the perfect meditative atmosphere for preparing mentally for the hours of new activities ahead.

"From the first day, despite our physical distancing, the energy was tangible. The positivity quietly circulating continued over the following days to encapsulate our programme, as we slowly took in and gave more, piecing together fragments of an idea; the reasons we are all here, the places we all came from and where we are up to with our journeys, how each of us expresses ourselves so very differently, yet an ability to communicate that seems to be the foundation of this newly-formed family.

***Dr. Diana Daly***
*Violinist and chamber musician Dr Diane Daly is course director on the MA in Classical String Performance at the Irish World Academy of Music and Dance at University of Limerick, where she also lectures in violin, chamber music, Dalcroze, Kodaly and improvisation.*

> "The MA classical String Performance is unique in comparison to other masters around the world, having a very deep artistic and mental focus"
>
> *- Dr Diane Daly*

"I came into the MA in Classical String Performance Program at the Irish World Academy of Music and Dance, with the idea that I would learn a great deal about being a better instrumentalist and performer. However, after the first week of classes, I can say that I have learned far more about myself in the last week, than I had learned in the last six years of higher education in classical music.

"Our first week was one of the most intensive schedules that I have ever taken part in, in any program ever. Each day was packed tight with chamber music rehearsals, lessons, chamber coachings, collaborative piano coachings, performance classes, and classes in movement.

"Dr Daly has devised one of the most imaginative, unique programs any young musician could ever take part in. I found and realized throughout the whole week, that this course will take me far beyond the goals and expectations that I had in mind for this program.

"The process of teaching us how to internalize rhythms and music through movement was a revolutionary experience. Information that I felt had taken years to memorize through reading, writing, and watching, I felt was internalized in a matter of moments. >

*Pictured: 'Feeling and showing how the music moves' - A typical ensemble rehersal on the MA Classical Strings programme in UL*
*Picture credit: Maurice Gunning*

> "The strength of this reputation can be seen from the international make-up of the current course cohort commencing September 2020. The 12 musicians who passed the stringent audition process travelled to Limerick from Mexico, Hungary, the USA, Estonia, Italy, Paraguay, the UK, Italy, the Ukraine, Croatia, Denmark and Austria
>
> *- Dr Diane Daly*

"The MA classical String Performance is unique in comparison to other masters around the world, having a very deep artistic and mental focus. Course Director Diane Daly and the other Irish Chamber Orchestra musicians search for the artist that each one of us carries within us, using all the artistic elements to fully edify the student.

Each subject enlightens us on music, professionalism, communication with other classmates, teachers and the public, but above all about ourselves, our goals, our strengths and weaknesses, and about our own body. It is truly a comprehensive career path for the artist.

"I am reminded what Einstein said about vibrations - "Everything is energy" and therefore we cannot fail to consider our body, our mind and our heart while making music, just as we cannot forget the world. Making music requires a lot of work of connection, of integration, of discovering the truth.

"I feel like I can paint a thousand canvases. I perceived the movement and the fine delicacy of Degas' dancers, the harmony of Monet's paintings, the seriousness and depth of Caravaggio's paintings, the joie de vivre of Matisse, the colors and abstract worlds of Kandinsky.

"A week full of events, discoveries, many activities, dedicated to special encounters and lots of wonderful music, which reminded me of Pablo Casal's dictum - "The main thing in life is not to be afraid of being human".

Dr Daly offered her thanks to Anna, Ellie, Isaac, Abigail, Giammaria, Marianne and Malte for sharing their reflections.

*- Andrew Carey*

*Picture credit: (Background) True Media*

# STRONG TIES BETWEEN UL AND AN GARDA SÍOCHÁNA ARE FURTHER DEEPENED

## Shane Kilcommins of the UL School of Law delves into a 'close working relationship'

*Pictured: Former UL President Dr Des Fitzgerald, Chief Bureau Officer Detective Chief Superintendent Patrick Clavin and Prof Shane Kilcommins.*
*Picture credits: Alan Place*

The first intake of recruits to the BA of Applied Policing took place in September 2014. It marked the start of a mutually beneficial educational relationship between UL and An Garda Síochána.

To date, 3,300 Garda recruits have graduated from the programme with a Level 7 degree from the Garda Training College and UL.

UL also accredits An Garda Síochána's Postgraduate Diploma in Serious Crime Investigation, and the Criminal Assets Bureau's Postgraduate Diploma in Proceeds of Crime, the latter of which was launched earlier this year and is being run out of UL's School of Law.

This builds on an already strong relationship which sees UL accredit Garda level 7 and level 9 training programmes, provide an online level 8 top up programme in Applied Policing for Garda members, and an MA in Serious Crime Investigation for those who have completed the postgraduate diploma in serious crime investigation.

UL also has an undergraduate degree in criminal justice and an LLM/MA in Criminal Justice and Human Rights.

The Diploma in Serious Crime Investigation is considered the flagship of the Crime Training Faculty, reflecting excellence in investigative management. It is designed to develop the expert knowledge, leadership and management skills of garda managers and other public bodies to equip them with the knowledge and skills necessary to investigate serious crime.

The Serious Crime Investigation diploma programme is informed by best international practice in crime investigation, internal case review, tribunal reports, the Director of Public Prosecutions and experts in forensics, electronic investigation and arrests.

It seeks to support and guide managers of An Garda Síochána and other public bodies that investigate serious crime with a learning environment that uses their existing expert knowledge, skills and experiences to enable them to achieve a broader investigative leadership, management skills and investigative insights.

While this programme has been designed primarily to meet garda needs, it is also available to senior investigative officers with other regulatory agencies such as the Revenue Commissioners, including the Customs Division, and the Irish Defence Forces.

The objective of the Proceeds of Crime postgraduate diploma is to provide a recognised standard of training for staff in CAB and other law enforcement, regulatory and administrative agencies in both Ireland and internationally who require academic and professional training in the field of specific investigations. It will help to establish standard operating procedures and identify established best practice in effective proceeds of crime investigations.

Launching it in February, then UL President Dr Des Fitzgerald said it was "enabling a professional community of practice to engage with a professional community of scholarship. The programme will enhance UL's position by continuing to build a critical mass in the areas of law enforcement and criminal justice."

Chief Bureau Officer Detective Chief Superintendent Patrick Clavin said CAB "looks forward to building on our close working relationship with UL. The Bureau welcome this opportunity to upskill its Bureau Officers to meet the challenges posed, both nationally and internationally, in asset identification, asset confiscation and asset recovery.

"The course provides the opportunity to ensure that best international practices are adhered to and the transfer of knowledge to ensure effective continuity into the future."

All of the programmes have original elements and are grounded in problem-based learning. The collaboration between UL's School of Law, the Garda Training College and CAB is a novel collaboration for criminal justice agencies, but very in keeping with national strategy for higher education which calls on universities to engage more widely with business, industry, training colleges and communities.

The programmes are also very transparent. As the accrediting body, UL is responsible for assuring the quality of programmes offered at the Garda College, which requires constant engagement on issues such as fairness of procedures, academic integrity, and the extent to which learning outcomes for are being achieved.

Human rights and ethical policing are embedded as core programme outcomes. This ensures that these values and the community are considered in the management of all policing situations, and the training provides a continuity of learning around these issues from problem based learning in the Garda College to work based learning in the Garda divisions and in CAB. - *Professor Shane Kilcommins*

# DELVING INTO LOCAL HISTORY

*Pictured: Portumna Workhouse*
*Picture credit: Dr David Fleming*

It is not often that the physical surroundings of a classroom can act as an evocative and inspirational environment in which to study. But that is the case for students on the Certificate in Local History programme offered in Portumna Workhouse, in Co. Galway. Now in its fourth year, the certificate is one of the most successful outreach programmes offered by UL's Department of History in association with the Irish Workhouse Centre, attracting local history enthusiasts and those wishing to gain a deeper knowledge and understanding of their localities.

Portumna's workhouse opened in 1852, after the worst of the Great Famine had passed. In the 70 years it operated, thousands of people found shelter and assistance in the sprawling complex of buildings. By the end of the 20th century it lay crumbling and derelict. Since 1999, the non-profit South East Galway Integrated Rural Development Company has been restoring the buildings and successfully finding uses for them. The workhouse now attracts visitors from all parts of the globe who wish to gain insights into life in an Irish workhouse.

While attending a conference at the workhouse in 2016, Dr David Fleming of the Department of History realised the potential the place had for delivering the Local History programme, and together with a dedicated team of tutors, many graduates of the Department's MA in Local History, began delivering classes.

To date 49 have graduated with certificates, and a further 15 are currently students on the programme, Dr Fleming explains. "Most of the students are mature, older individuals, from the south-east Galway and North Tipperary areas, but others have travelled as far as Kerry and Roscommon to attend classes.

"Portumna's workhouse opened in 1852, after the worst of the Great Famine had passed. In the 70 years it operated, thousands of people found shelter and assistance in the sprawling complex of buildings"

"All are passionate about history, but several never had the opportunity to study it in a formal way. The Certificate is designed to introduce students to the basics of primary and secondary source historical research in a friendly and open environment. Notwithstanding the often cold Wednesday nights, classes in the workhouse are full of discussion, learning and enjoyment. Several have been inspired to go on to further historical study and research.

"While it can sometimes be unsettling to imagine the misery and drudgery of those who resided in Portumna's workhouse, now it provides one of the best places for history students to learn in a place so redolent of the times and people that form part of their studies," added Dr Fleming. - *Alan Owens*

# LESSONS FROM THE COVID19 PARADOX: WHILE WE SURVIVE NATURE THRIVES

Little would we have thought that the COVID19 global pandemic would bring to the fore the links between human and planetary health.

This link is now the core focus of a European project that will help create pocket parks to maximise the available public space for active recreation and restoration.

During the lockdown scenarios of late Spring, many urban ecosystems prospered with, for example, sightings of urban foxes and an enriched soundscape with birdsong resonating.

On the other hand, our physical and mental health suffered as we were socially isolated and subject to physical restrictions in our capacity to engage in sport, go to gyms or engage in active travel.

COVID19 lockdown saw reduced noise and air pollution in urban conurbations globally and gave us a glimpse of a carbon neutral future for city dwellers.

The solution was to turn to natural spaces, both blue and green, for well-being and physical activity and UL is now among a 38 partner program that will examine three insights on why making nature healthy again is key to our physical and mental wellbeing.

Dr Tadhg MacIntyre, course director MSc Programs in Sport, Exercise and Performance Psychology and coordinator GOGREEN ROUTES H2020 Project said that these issues are central to the €10.5m European project that aims to transform both environmental and human health.

"Emerging evidence from Big Data (e.g. google mobility) and surveys by Sport Ireland suggest that people flocked to green spaces during lockdown for mental health, physical activity and social interaction.

> We learnt a great deal about our locality under lockdown including how little access we have to public green and blue space. Many urban dwellers had not access to greenspace within 2km or even 5km of their dwellings
>
> - *Dr Tadhg MacIntyre*

"For example, between March and May this year, the numbers walking for recreation were at an unprecedented level. Dr Una May, Director of Participation and Ethics at Sport Ireland, recently stated that it took a global pandemic to get Ireland active."

In a book published last year by Dr MacIntyre Dr Aoife Donnelly from TUD, the pair assert that "we can interact with nature in various ways; walking in nature, engaging in sport or play and indeed just being in nature for restoration as it can have significant positive impact on physical and mental well-being."

However, from access to greenspace to internet connectivity, the COVID19 global pandemic has shone a spotlight on the inequalities in society.

The World Health Organisation (WHO) recommends access to greenspace at least two hectares in size (e.g. about two football pitches), no more than 300m (five minutes' walk) from home.

"We learnt a great deal about our locality under lockdown including how little access we have to public green and blue space. Many urban dwellers had no access to greenspace within 2km or even 5km of their dwellings.

"Where natural settings did exist they were often restricted private space (or pseudo-greenspace), degraded natural environments with limited biodiversity and lacking tree canopy cover, all of which reduce the positive impact on human and environmental health.

"To address these challenges, our project will help create pocket parks to maximise the available public space for active recreation and restoration. A lesson from the global pandemic is that we need to integrate greater amounts of greenspace in our cities through linear parks for active travel and by providing quiet spaces with urban living rooms for recovery and social interaction. Outdoor activities such as sustainable physical activity provide a safe setting with reduced transmission of the disease compared to indoor sport activities."

If COVID19 is to provide learning which can impact upon how we perceive our environment, our appreciation to nature and sustainability, then we have to ask the right questions," according to Dr MacIntyre.

"We are addressing a number of interdisciplinary questions regarding changes in our habits during lockdown and de-confinement scenarios with a citizen survey across the six cities targeted in the project.

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> Limerick city is increasingly synonymous with the concept of change with the Limerick Regeneration Framework Implementation Plan, Limerick 2030, and a central role in delivering the ambitious growth outlined in the Project Ireland 2040
>
> - *Dr Tadhg MacIntyre*

"This knowledge will help advance strategies to both build back better and re-nature cities for health."

Dr MacIntyre goes on to say that "language is key to igniting cultural shifts and the pandemic, while a "crisis" for many who personally suffered, presented a "challenge" for society which translates as real opportunities to pivot in how we view our urban spaces, how we travel and how we think about nature.

"Limerick city is increasingly synonymous with the concept of change with the Limerick Regeneration Framework Implementation Plan, Limerick 2030, and a central role in delivering the ambitious growth outlined in the Project Ireland 2040.

"The common language of human and planetary health are the UN sustainable development goals. These 17 goals and their targets (e.g. Target 11.7 by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities) need to become part of our vernacular to transition to a 'new normal' and build back better. Urban Nature will be at the forefront of how we re-imagine our cities. If nature wins we can all thrive together."

Together with Dr MacIntyre on mental health, an interdisciplinary team at UL involved in the project includes; Professor Stephen Kinsella, economics; Dr Norma Bargary, statistical modelling; Professor Alan Donnelly, physical activity; Dr Giles Warrington, exercise physiology; Dr Conor Little, governance; Dr Elaine Gallagher, citizen science and Dr Eibhlís O'Connor and Dr Audrey Tierney, nutrition and sustainability.

"Our team of five doctoral students at UL are part of a knowledge ecosystem for early career researchers and innovators across the project and this will enable future leaders to emerge from the project," Dr MacIntyre revealed.

- *Andrew Carey*

# ABOUT THE PROJECT

*GOGREEN ROUTES, Sept. 2020-Aug. 2024, is a 38 partner four-year project which applies visionary and integrated solutions to improve health in cities. The €10.48 million project is coordinated at the Health Research Institute at the University of Limerick. The project is funded by the European Union's Horizon 2020 framework programme under grant agreement no. 869764.*

**More information is available at https://cordis.europa.eu/project/id/869764**

**Twitter @Tadhgmacintyre**

**Dr Tadhg MacIntyre**, *a lecturer in psychology at UL and coordinator of the Go Green Routes project, which is funded under the European Union's Horizon 2020 framework programme.*

*Picture credit: (Background) iStock*

# CONFIRM HQ: UNIVERSITY OF LIMERICK LEADING THE WAY IN FOURTH INDUSTRIAL REVOLUTION

In University of Limerick's Digital District, a smart revolution is taking place.

Confirm, the world-leading Science Foundation Ireland research centre in Smart Manufacturing which is hosted by UL at Park Point, has just completed the construction of a bespoke new dedicated Digital Manufacturing facility, supported to the tune of €3.1 million by UL.

The Confirm Centre hosts 130 researchers, 12 operational and management staff with more to follow and its new facilities are futuristic – a large test-bed to house Ireland's future factory demonstrators, an 8 metre diameter Virtual Reality Cave, 10Gbyte internet access, the first 5G Digital Manufacturing Network in Ireland, and a Digital Manufacturing lab to include metal, plastic and electronic printing and non-contact 3D part scanning.

The manufacturing sector is the second largest employer in Ireland, accounting for around €110 billion in exports. Smart manufacturing optimises production systems by adding intelligence through enhanced information technology.

This new technology will be at the heart of the factories of the future, increasing product line adaptability, enabling real-time decision-making, shortening supply-chains, and speeding up the development of new innovations to produce higher-quality goods at reduced costs across all industry sectors.

Confirm's vision is to fundamentally transform industry to a smart manufacturing ecosystem by integrating intelligence within products, machines, production systems and supply chains.

To achieve this vision, it has set out on a mission to carry out world leading digital manufacturing research to develop future Smart Manufacturing technologies; to develop a community of practice to embrace the 4th Industrial Revolution together as a nation; to develop talent and an engaged public to drive a positive perception of manufacturing in Ireland, and to help create the next wave of future manufacturing talent to underpin industry and also to look at internationalisation as part of its growth strategy.

Since launching in 2017, Confirm has an extensive researcher network that spans nine Irish Higher Education Institutes led by UL and has secured €47 million in research from Industry, government and from non-exchequer sources.

"We work collaboratively with industry to pioneer research excellence to meet current and future smart manufacturing needs," explains Director of Confirm Professor Conor McCarthy.

"Confirm gives industry partners a competitive advantage by ensuring the right research team is working to drive business readiness for Industry 4.0. We have the experience working across multinationals and SMEs within diverse sectors including, pharmaceuticals, medical devices, chemical, nutrition and beverage, computer, electronic, optical and electrical equipment," adds Professor McCarthy.

The new facility will be the centrepiece of Confirm's research network and through a dedicated Community of Practice area, will link researchers, industry partners and the general public together to raise the profile of manufacturing in Ireland and internationally, Professor McCarthy explains.

"Confirm – Smart Manufacturing is a leading international centre for cyber-physical manufacturing systems research and digital supply chain," he outlines.

"We bring together a unique blend of leading scientists and engineers to carry out fundamental research to underpin the development of Ireland's future factories and supply chains. This research also provides the foundation for industry applied research in the areas of smart products, machines, production systems and supply chains.

"Confirm has built a world-class research facility in Limerick city and adjacent to UL, where we work closely with industry on future emerging smart manufacturing technologies, including collaborative robots, virtual reality training, predicative maintenance, smart data acquisition and wireless factories, to name but a few," he added.

Welcoming the development of the cutting-edge facility, UL's Vice President for Research Professor Norelee Kennedy, said: "The hosting of Confirm builds on the University of Limerick's long history of involvement in manufacturing by bringing together the various aspects of manufacturing research, education and industry engagement.

"In recognition of the importance of Confirm to the University over €3.1 million in funding has been allocated to support the development of Confirm HQ as well as the creation of a number of academic posts to support its ambitions. Confirm, with its unique focus on cyber physical manufacturing, allows for the development of new areas of discovery that further builds on UL's strengths including mathematics, robotics, health and materials.

"We are delighted to host the centre and to work with our colleagues internationally, nationally and in the Mid-West to ensure Confirm becomes a global leader in the field of smart manufacturing and that it delivers cutting edge research in the field of manufacturing," she added.

*- Alan Owens*

*Pictures: First glimpse of Confirm's new SFI research centre in smart manufacturing hosted by UL at Park Point.*
*Pictured are: UL President Professor Kerstin Mey, Professor Conor McCarthy and Eoin O'Connell. Picture credit: True Media*


> Confirm – Smart Manufacturing is a leading international centre for cyber-physical manufacturing systems research and digital supply chain
>
> - *Professor Conor McCarthy*



## UL RESEARCHERS DEVELOP

# NEW SPERM SELECTION TECHNOLOGY

## FOR USE IN ASSISTED HUMAN REPRODUCTION

Researchers at UL have developed an exciting new technology for the selection of better quality sperm for use in assisted human reproduction.

With an estimated one in six couples experiencing infertility problems, the microfluidics technology developed at UL could offer some hope to those seeking to start a family.

neoMimix, a start-up from the University of Limerick, has been announced as a winner of the EIT Health Headstart competition for 2020. The prestigious competition supports the most innovative European start-ups to accelerate their market launch through a €40,000 cash prize.

Using funding secured from Enterprise Ireland's Commercialisation Fund, the UL researchers have developed an exciting new microfluidics-based technology for the selection of better quality sperm for use in assisted human reproduction.

"Infertility problems have been driven by increasing maternal age as well as by the halving of sperm counts over the last 40 years," said Dr Sean Fair, Reproductive Biologist and project lead at UL.

"The most common fertility treatment couples undergo is in vitro fertilisation (IVF) and despite major advances in IVF over the last 40 years, two out of three cycles fail resulting in financial and emotional pain for couples.

"While little can be done to improve the number or quality of women's eggs, men normally produce tens of millions of sperm yet only one is required to fertilise an egg. Despite the large number of sperm produced by men, very few are normal," he explained.

The technology developed at UL uses microfluidics to mimic the journey sperm would travel in the female reproductive tract, thereby selecting the fittest and most functional sperm, which can then be used in IVF to improve outcomes.

Working with fertility clinics, the team have demonstrated that the selected sperm have significantly better DNA integrity than that selected by currently used methods.

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> "Infertility problems have been driven by increasing maternal age as well as by the halving of sperm counts over the last 40 years"
>
> - *Dr Sean Fair*

The solution provides the most natural, ex-vivo, biomimicry of the female reproductive tract for sorting and selecting the highest grade, lowest DNA fragmented sperm in a simple and fully traceable process.

"Women whose male partners have poor sperm DNA integrity are twice as likely to have a miscarriage and therefore by selecting only sperm with intact DNA the risk of miscarriage can be significantly reduced," said Dr Fair.

"Sperm naturally swim up the female reproductive tract on their way to meet the egg in the fallopian tube and en route they must swim against an outward flow of mucus that is secreted around the time of ovulation. This means that only the fittest sperm reach the egg," he explained.

"The technology developed at UL replicates this journey on a micro-device so that sperm swim against an active fluid flow within micro-channels, mimicking what happens naturally. The fittest sperm are then selected for use in fertility treatment.

"It is the result of over five years of painstaking work by the UL team as they have optimised the architecture of the micro-device and fluid flow profiles to ensure that only the best quality sperm are selected. The team are now working on further clinical validation of the technology after which regulatory approval will be sought," he added.

The research is a multidisciplinary collaboration between Dr Fair, Ms Karen Browne (Commercial Lead), Dr David Newport (Fluidics Engineer), Professor Leonard O'Sullivan and Dr Eoin White (Product Design) as well as with local fertility clinics.

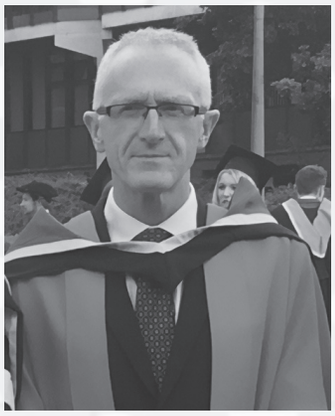
- *Alan Owens*

> The technology developed at UL replicates this journey on a micro-device so that sperm swim against an active fluid flow within micro-channels, mimicking what happens naturally. The fittest sperm are then selected for use in fertility treatment
>
> - *Dr Sean Fair*

*Picture credit: iStock*

# BERNAL PROFILES

## Professor JJ Leahy: 'By making simple changes, we can have a positive impact on climate change'



A researcher at University of Limerick has said that simple changes made by people to reduce their carbon footprint could have 'a positive impact on climate change'.

JJ Leahy, associate professor in UL's Department of Chemical Sciences and a member of the Bernal Institute, is the energy and transport expert for the RTE TV Series 'What Planet Are You On', which focuses on getting households to take part in the fight against climate change by reducing their carbon footprint.

Professor Leahy is involved in teaching, curriculum development and research in the area of waste management and renewable energy and heads a research group consisting of chemists and chemical engineers that is focused on chemical technologies for biofuels and biorefining from wastes.

He has forged links with stakeholders in the national agro-food and biofuels industries.

"Most of us are unaware of how much energy we use in our daily lives. When we use energy in our homes or for travel we produce greenhouse gases and contribute directly to climate change and consequent habitat destruction. However, by making simple changes each of us can reduce our carbon footprint and have a positive impact on climate change," said Professor Leahy.

"While our homes are responsible for a quarter of energy-related CO2 emissions each year in Ireland, for most homes, heating can have almost three times the carbon footprint of electricity.

"Thankfully, we are on a downward trend as people become aware of climate change and are taking greater personal responsibility for example since 2006 there were significant reductions in the CO2 emissions from heating our homes primarily due to a shift from coal and oil to gas heating.

"Retrofitting solar electric panels in our houses could contribute up to 70% of electricity demand for households during summer months when sunshine is most plentiful. Because we can dry clothes under any circumstances we tend to wash our clothes more frequently than perhaps we need to. I think people will be surprised to learn how much energy they consume in their tumble dryers, which is more than twice that of their washing machine.

"About 30% of all electricity in Ireland is consumed within our homes While electricity usage is rising, the associated greenhouse gas emissions have fallen by a third since 2005. But this was due primarily to reasons outside our personal control and is mostly due to the replacement of coal and oil with natural gas as well as greater use of wind for power generation.

"We can contribute individually by using less electricity but we can also reduce our carbon footprint by using our large appliances such as washing machine or dishwasher at night when demand for electricity is low and there is a higher fraction of renewable power available," Professor Leahy added.

Professor Leahy is associated with MaREI – the SFI Research Centre for Energy, Climate and Marine - and SFI's Bioeconomy centre – and this collaboration with industry and commitment to reducing our carbon footprint has led to two start-up biofuels companies as well as currently leading two EU projects on the Circular Bioeconomy, REFLOW and BIOWILL.

REFLOW involves academic and industrial organisations in seven countries, focusing on the recycling of phosphorous from the wastewater solids in dairy factories and using it as a CE marked fertilizer components.

The BIOWILL project aims to be a flagship for rural Ireland through a zero-waste biorefinery utilising all fractions of willow trees for the production of high to medium based biochemicals/materials and renewable energy in the form of biomethane production and natural fertilisers. The project consists of 10 partners in four countries across Europe.

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## Professor Gavin Walker: Cutting–edge research at University of Limerick focuses on process engineering

Cutting-edge research taking place at University of Limerick's Bernal Institute is ensuring that solutions are being "brought to the factory-floor with absolute efficiency and precision".

These are the words of Professor Gavin Walker, who holds the Bernal Chair in Pharmaceutical Engineering and is leader of the Process Engineering Cluster in the Bernal Institute, which among other research themes, aims to reduce the waste generation and net energy consumption of manufacturing processes.

This research taking place at UL will provide a basis for innovation within the Irish and European manufacturing sectors, meaning that challenging EU carbon emission targets are met, and ultimately will lead to a substantial contribution to the abatement of global warming, he argues.

This research programme also aligns with the attainment of the UN Global Sustainable Development Goals (SDGs), which

are critical to UL's Global engagement action plan 2020-2024 and vision for the future.

Professor Walker has consistently secured substantial research funding to lead next generation process engineering and pharmaceutical manufacturing within the Bernal Institute, since taking up the professorship in 2012.

He also has a senior leadership role of three of UL's national research centres; The Pharmaceutical Manufacturing Technology Centre, (PMTC), The Diary Processing Technology Centre (DPTC), and SSPC, the SFI Research Centre for Pharmaceuticals, where he is co-director.

"These national centres are embedded within the multi-disciplinary Process Engineering Cluster within Bernal and are changing how the Institute trains post-graduate chemical engineers, chemists, mathematicians and pharmacists, which impacts industry competitiveness and attracts international R&D and Foreign Direct Investment into Ireland," explains Professor Walker.

"The award-winning Process Engineering Laboratory at the Bernal Institute has been recognized as being unique in Ireland with a full industrial scale, ventilated laboratory space and state-of-the art analytical equipment. Both wet and dry chemistry facilities are available and the laboratory operates industry-standard quality systems, to 5s methodology.

"In this environment, industry can be confident that the solutions provided meet international standards. In addition, the availability of industrial-scale equipment ensures that our solutions are brought to the factory-floor with absolute efficiency and precision," he adds.

The specific goals for the Bernal Process Engineering Cluster are to:

- Develop efficient manufacturing processes ranging from high-added-value specialty products such as vaccines, medicine and food ingredients, to commodity products such as food stuffs, chemical building blocks and energy carriers that are safe, high-quality and affordable;
- Significantly reduce the capital and operation costs of processes. This will assist in enabling billions of people in emerging markets and the developing world to benefit from dramatically improved availability to medicines and nutrition (Health), and worldwide access to affordable and clean energy;
- Reduce the waste generation and net energy consumption of manufacturing processes, which will ultimately facilitate the achievement of current carbon emission targets and contribute substantially to reduced green-house gas emissions.

Researchers led by Professor Walker at UL are generating the chemical engineering solutions for the challenges of personalised medicine. This highly cited research is changing how we train chemical engineers, impacting industry competitiveness, and attracting R&D investment into Ireland.

Professor Walker recently secured €1.9 million from SFI to develop an Advanced Drug Product Manufacturing Facility at the Bernal, an investment he says "will allow UL to lead the development of personalised medicines, which is the next great global challenge for the pharmaceutical industry".

"The vision of the pharmacy of the future is one in which pharmacies employ disruptive technologies to enable on-demand manufacture of drugs designed to individual needs. For example, multiple medications may be prescribed that treat a patient's exact age-profile and medical history. These medications could then be 3D printed into one tablet, on-demand at the patient's local drug supplier," Professor Walker explains.

"Central to this vision is the concept of continuous processing. Currently, active pharmaceutical ingredients are manufactured in large batches at distinctly separate times. Continuous processing replaces this large-batch process with the manufacture of lower volumes, but at a constant rate.

"This process enables the continuous flow of product, reduces inventories, and has less batch-to-batch variation, giving higher process control and higher quality, which ultimately leads to better medicines and patient outcomes, again in alignment with UN Global Sustainable Development Goals and UL's vision for the future," he adds.

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## **Dr Sarah Hudson:** 'I get great enjoyment from interacting with students and watching them learn and develop their own styles and methodologies'

University of Limerick researcher Dr Sarah Hudson is currently leading a Marie Skłodowska-Curie ITN project to develop long acting drug formulations that achieve extended release dosage to fight diseases.

The Bernal Institute member, SSPC Investigator and member of UL's Department of Chemical Sciences, says there is a current, future and global need for the development of such formulations that achieve prolonged therapeutic doses that are stable, predictable and which can be applied across multiple and complex active pharmaceutical ingredient groups.

Dr Hudson's research focuses on the solution and solid state behaviour of both small and larger biomolecules and she recently received additional funding from the Science Foundation Ireland New Frontiers Programme for the development of novel dual acting antimicrobial peptides as antibiotics.

She is also the principal investigator on a Disruptive Technology Innovation Fund lead by Cala Medical where she focuses on the delivery of therapeutic enzymes for immune-mediated inflammatory disorders and has several collaborations in the biopharmaceutical space with industrial partners.

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Novel drug formulations and delivery systems that enable innovative therapies will expedite the pathway from drug discovery to a drug product and unlock potential cost efficiencies for pharmaceutical manufacturers, but also, and importantly, it will result in effective therapies at lower cost for vulnerable patient groups such as those facing chronic illness or those living in the developing world.

"My research ultimately focuses on understanding the behaviour of complex therapies in manufacturing processes and upon administration to a patient - I enjoy planning the experiments, analysing the data and trying to explain the results but I get the greatest enjoyment from interacting with the students, both at undergraduate and postgraduate level, and watching them work through existing theories and question the approaches that people have taken before them - it is great to watch them learn and develop their own styles and methodologies," Dr Hudson explained.

Sarah studied Chemistry at Trinity College Dublin where she was a Foundation Scholar, completed her PhD in at UL and later secured a Marie Curie Outgoing International Fellowship to work with Professor Robert Langer in MIT, USA.

Described by Harvard Business Review as the 'Edison of Medicine', Professor Langer is credited with improving the lives of more than two billion people worldwide through his work in developing novel drug-delivery systems.

Professor Langer was awarded an honorary doctorate in engineering from UL in May 2018. During his visit to UL he officially opened the Bernal Bio Laboratories at the Bernal Institute and said: "UL is fast-developing a reputation for innovative research. The work being undertaken here has the potential to change the lives of so many people and these new laboratories present a great opportunity for UL researchers to continue their cutting-edge work in the areas of bioengineering and bioprocessing in a state-of-the-art environment."

Sarah continues to collaborate with Professor Langer to develop more effective medicines and drug delivery systems to target disease.

In response to the global shortage of reagents and extraction kits for Covid19 testing last March, Sarah and her colleague at Bernal Bio Labs, Dr Edel Durack, co-ordinated the preparation of testing solutions for use at University Hospital Limerick and other hospitals across Ireland. - *Alan Owens*

# MOYO NUA – RECEIVES SEED FUNDING

The award winning UL social enterprise Moyo Nua has officially broken ground in launching its pilot programme in Malawi with GOAL Global, supported by the UL Foundation. The project aims to improve the health and wellbeing, and financial prosperity, of smallholder farmers across Least Developed Countries globally. Moyo Nua was founded by 3rd year International Business undergraduate student Jack O'Connor, who co-leads the project with 4th year business students Elaine Gleeson and Jessica Habenicht; along with six other members and a wide network of supporting stakeholders.

Moyo Nua has partnered with GOAL Global to operate a pilot programme in five districts across Malawi over a nine-month period. The purpose of this pilot is to trial the manufacturing, distribution, and testing of their product with smallholder farmers. The pilot is running until summer 2021, and is expected to impact 600 beneficiaries. Jack O'Connor outlines the significance of the pilot programme, stating: "Working with GOAL Global allows Moyo Nua to harness the subject-matter expertise of a renowned INGO, in order to trial the project before wider rollout across smallholder farming communities."

The project currently competes with the University in Enactus - a global student social enterprise competition. Since its inception as a BT Young Scientist project in 2017, Moyo Nua has found success as both a product innovation and business idea; winning the WTCA 'Peace Through Trade' World Cup and featuring on Forbes, to its most recent success of placing in the top 0.16% of projects from a pool of over 75,000 projects in the 2020 Hult Prize.

With sustainability at its core, the Moyo Nua team focuses on being idealists in vision, and pragmatists in execution; working on nine of the 17 UN Sustainable Development Goals (SDGs).

The project blends business and commerce with sustainable development in order to effectively improve the livelihoods of its stakeholders. Speaking on Moyo Nua, Harvey Duthie, CEO of the UL Foundation, commented: "Here is another great example of UL's enterprising spirit, and truly global vision. UL Foundation is delighted to support this student-driven social enterprise in Malawi."

The name Moyo Nua is a dual-language term, meaning New Life in Chewa (the language of Malawi) and Irish. The name symbolises the integration created by Moyo Nua between Ireland and Malawi; and developed and developing nations.

The pilot programme enables Moyo Nua to create farming tools that are both ergonomically-designed and environmentally-friendly; that not only improve smallholder farmers' efficiency and physical health, but also create vital income and employment opportunities in Least Developed Countries.

The farming tool created, a handheld seed planter, is made from locally-sourced bamboo and metal. This product eliminates the need for bending over during the planting process for smallholders; reducing labour intensity and improving their physical health.

These planters are easily made, and cost-efficient for use within these regions. The bamboo is sourced locally, and the metal heads are made by local blacksmiths. The manufacturing process of these planters are conducted locally within each region of operation. With this said, Moyo Nua creates trade for local labourers; and intends on hiring full-time employees within its regions of operation once product demand is quantified post-pilot. - *Andrew Carey*

**You can keep up to date with Moyo Nua's progress by following online @MoyoNua, or by emailing info@moyonua.org.**

# HRI AND CRSU INVOLVED IN STUDIES THAT CONTRIBUTE TO UNDERSTANDING COVID–19

Studies supported by the Clinical Research Support Unit (CRSU), which makes up an important part of the HRI, include research in such diverse areas as concussion, stroke, rheumatoid arthritis, Emergency Department assessment and intervention and now COVID-19.

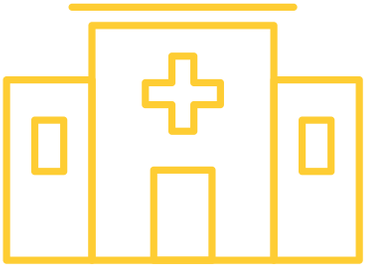
To that end, the effects and impacts of the current global pandemic have been central to some of the recent research conducted at the HRI and UHL.

Last February the Unit, based at the CERC building at UHL, saw members of the HRI- CRSU team working with many Investigators on multiple projects ranging from intervention studies on arthritis to clinical trials in stroke.

The focus changed for all in March and the CRSU suspended many of its research studies. Staff prepared themselves to work from home and work was prioritised.

COVID 19 became the focus and the Unit was asked to be part of the research team for the Sprint SARI study with Dr Catherine Motherway.

SPRINT-SARI is an international, multi-centre, prospective, short period incidence observational study of patients in participating hospitals and intensive care units (ICUs) with severe acute respiratory infection.



Patients with COVID 19 who were admitted to the Intensive Care Unit of UHL and who met the eligibility criteria for the study were admitted to the study.

Dr Motherway said that as COVID 19 is a new disease, it "has had a profound effect on all of our lives. Large scale international observational data such as SPRINT SARI will, we hope, contribute further to our understanding of the disease and assist us in developing better treatment and management strategies as we move through this pandemic. The old Irish saying comes to mind - Ní neart go cur le chéile".

Another study with Infectious Disease Consultant Dr Sarah O'Connell in UHL saw the CRSU collaborating on the WHO Solidarity study, an international clinical trial to help find an effective treatment for COVID-19.

The study will compare options against standard of care, to assess their relative effectiveness against COVID-19.

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> Networking with over 250 members from faculties and University Hospital Limerick (UHL), the Health Research Institute, founded in 2014 at UL, provides a unique trans–disciplinary approach to health research with an emphasis on results with relevance, which translate effectively into the health practice setting.

"

(Covid-19) has had a profound effect on all of our lives. Large scale international observational data such as SPTINT SARI will, we hope, contribute further to our understanding of the disease and assist us in developing better treatment and management strategies as we move through this pandemic. The old Irish saying comes to mind - Ní neart go cur le chéile

- *Dr Catherine Motherway*

"

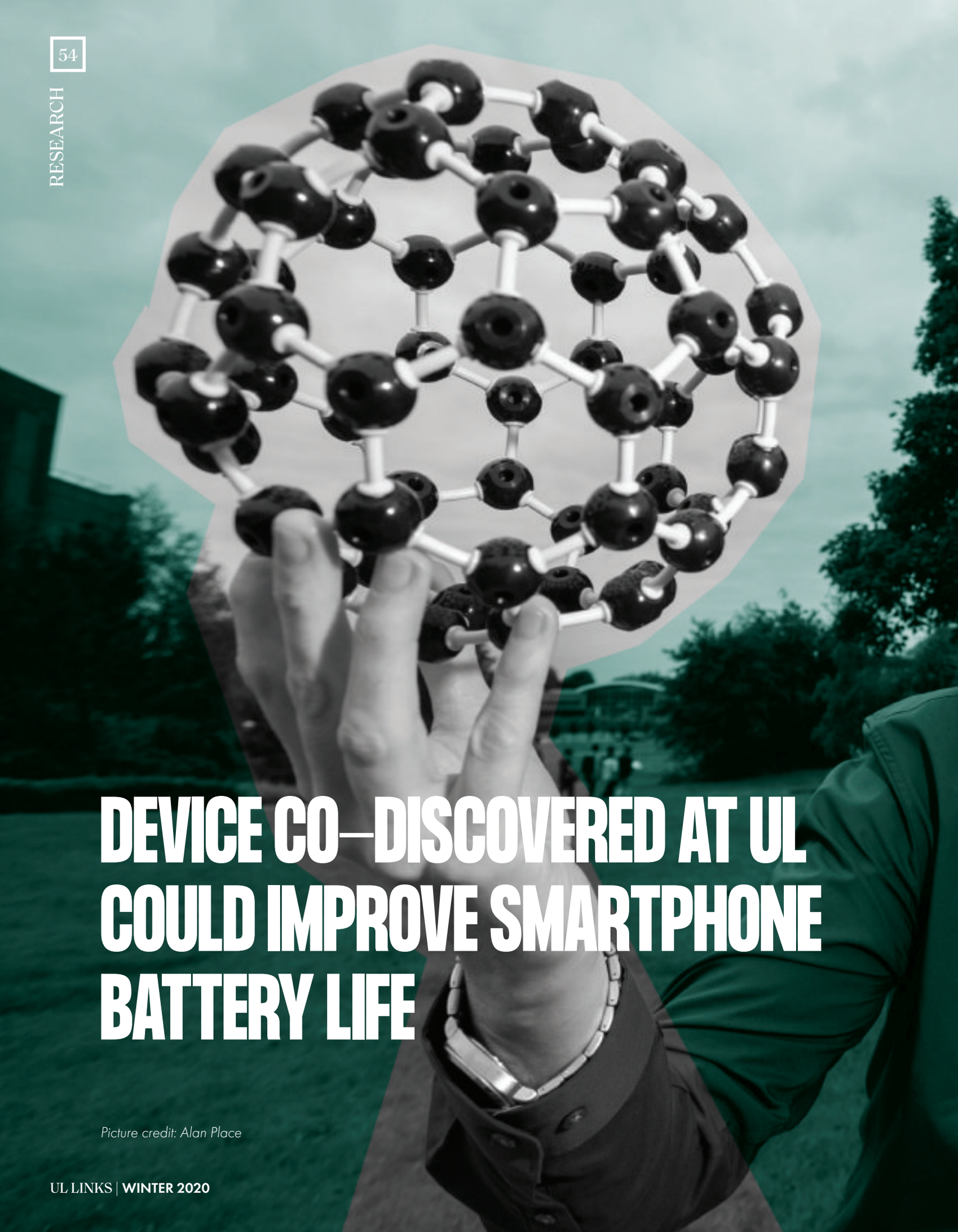
> This is a worldwide study and it is hoped that by enrolling patients in multiple countries, the Solidarity Trial will rapidly discover whether any of the drugs slow disease progression or improve survival. Other drugs can be added based on emerging evidence.

In July 2020, WHO decided to discontinue the trial's Hydroxychloroquine arm following a review of the interim results of the study which showed that Hydroxychloroquine produced little or no reduction in the mortality of hospitalized COVID-19 patients when compared to standard of care. The Unit has worked with Dr O'Connell on the start-up of the study in UHL and is hoping to recruit patients shortly. The study is also taking place in several hospitals across Ireland.

- *Andrew Carey*

**The HRI-CRSU provides a high-quality infrastructure and experienced research staff working to required international quality standards that are critical for the conduct of regulated and other forms of complex patient-focussed research.**

**The HRI-CRSU provides research nursing support and services including patient recruitment, ethics and regulatory advice, protocol development and phlebotomy.**



# DEVICE CO-DISCOVERED AT UL COULD IMPROVE SMARTPHONE BATTERY LIFE

*Picture credit: Alan Place*

> Support from Science Foundation Ireland and the EU allows us to push forward our capabilities to the point where our designs are providing solutions to global challenges
>
> - *Dr Damien Thompson*

A team at University of Limerick has played a central role in the discovery of a new device that promises to end overheating in portable devices and prolong battery lifetimes.

The Materials Modelling Group based in the Bernal Institute at UL, working with an international team of researchers, have co-discovered an exciting new type of molecular switch that could greatly reduce power consumption in electronic devices.

The finding has just been reported in the world-leading science journal Nature Materials and comes at a time when global consumer demand for ever lighter, more compact smartphones and tablets has never been higher – driving the discovery of new science and innovations at an astonishing pace.

Dr Damien Thompson, Associate Professor in Physics at UL who leads a research team in predictive materials design at the Bernal Institute, collaborated with Prof Christian Nijhuis at National University of Singapore and Prof Enrique del Barco of University of Central Florida to produce this new molecular-scale solution for high-density computing. >

Dr Thompson predicted using computer modelling that the organic material used in the device can "double job" by acting as both a switch and memory storage.

"The engineered device is just two nanometres thick and provides an exciting new paradigm for creating electrical circuits. It works by combining both diode switch and memory element within the same single circuit component, which gives dramatic improvement in power consumption. The new device could replace the larger and more energy hungry 'one diode – one resistor' architecture that connects a diode switch in series with a memory element," Dr Thompson explained.

"Until now, molecular scale switches in electrical circuits were limited to just a single function and suffered from charge leakage, poor reproducibility and instability. The new dual-function switch removes these obstacles, by stabilising the molecule under the extremely high gigavolt-per-meter electric fields produced as charge flows through circuits," he added.

This discovery of multiple functions all within a single molecule may help speed-up development of new technologies involving artificial synapses and neural networks.

The new molecular switch works by shuttling charged ions between the molecules and the device surface, in a manner analogous to voltage-gating ion channels evolved in cell biology, which is made possible by reversible, pairwise bonding of the molecules inside the device.

Following intensive rounds of atomic-scale measurements guided by quantum mechanical models, the researchers found the right combination of stability and switchability that yielded the resistive RAM properties within a layer just 2nm thick.

There are still challenges that need to be addressed to further advance these types of new nanotechnologies, explained Dr Thompson.

"Support from Science Foundation Ireland and the EU allows us to push forward our capabilities to the point where our designs are providing solutions to global challenges," he said.

"Deciphering the underlying mechanisms of how smart materials work, gives us confidence to propose bold new device designs. As the scientific community continues to advance the field of predictive materials modelling, we are enabling new developments in artificial intelligence, environmental monitoring and biopharma that will improve lives," Dr Thompson added.

- *Alan Owens*

# UL AND INDUSTRY COLLABORATION LEADS TO EUROPE'S LARGEST BATTERY-POWERED ELECTRICITY-GRID-STABILISATION FACILITY

A unique collaboration between University of Limerick and energy industry partners will see one of the largest battery powered grid stabilisation units in the world constructed in Ireland.

Dr Robert Lynch, lecturer in energy at the UL department of physics and the Bernal Institute, has been involved in the project since 2019 and will be part of the team overseeing the construction of 200 MW of electricity grid stabilisation systems which is currently underway in Co. Offaly.

The project, providing 120 jobs during construction, will see the first half of the facility completed and commissioned by March 2021.

It is part of a collaboration between Lumcloon Energy Limited (LEL; a local developer of energy storage and renewables projects) and their South Korean partners, Hanwha Energy Corporation. The project, based in Lumcloon and Shannonbridge in west Offaly, follows on from several collaborations between Dr Lynch and LEL. The two 100 MW battery-powered electricity-grid-stabilisation plants and will involve a combined investment of €150 million. Once completed, this will be one of the largest battery powered grid stabilisation facilities worldwide and the largest facility of its type in the EU.

Speaking to UL Links, Dr Lynch explained that "there are many positive impacts of these systems, in particular in terms of reduction in pollution of the environment and of improved energy stability.

"The two facilities are unobtrusive, almost silent in operation and not power plants in the conventional sense.

"Currently, whenever there is a large fraction of power from wind energy penetrating the electricity grid, fossil fuels must be burnt to stabilise the grid while delivering power at below optimum efficiency.

>

*Pictured: Dr Nathan Quill & Dr Robert Lynch at the Co Offally site, (Opposite page) Construction as of July 2020 & (Background) Shane Rounce/Upsplash*

This facility, and facilities of this type, will allow power coming from renewable energy to reach 70 per cent of the instantaneous power being delivered by the Irish electricity grid while keeping the grid stable, reducing our dependence on imported fuel."

Nigel Realms of Lumcloon Energy highlights that "the project will help the state to greatly mitigate hefty emissions fines threatened by the EU, related to Ireland's failure to fully meet 2020 targets, and will benefit consumers and business alike.

"Our electricity traditionally came from highly pollutant sources, like coal, peat, gas and oil, which is no longer sustainable. The new plants at Lumcloon and Shannonbridge will help make Offaly and Ireland a world leader and pioneer in renewable energy".

Construction officially commenced in September of last year with the official 'turning-of-the-sod' attended by Mr Richard Bruton, TD (Minister for Communications, Climate Action and Environment) Mr Woon-ki Lyeo (Ambassador of South Korea to Ireland) Mr Mark Foley (CEO, Eirgrid), Mr Du Hyoung Ryoo (CEO, Hanwha Energy Corporation, Korea), Mr Nigel Reams (CEO, Lumcloon Energy Ltd.) and Dr Lynch.

Dr Lynch further explains that UL is the leading research facility in Ireland in the field of electrochemical energy storage and has led this field for over a decade with a large concentration of related research across the Bernal Institute and the Faculty of Science and Engineering.

The research in this area in UL is extensive and conducted by multiple academics. Professor Noel Buckley, Dr Ian Clancy, Dr Robert Lynch and Dr Fernando Rhen in the Department of Physics work on flow batteries, fuel cells, battery monitoring and electricity grid stabilisation. Professor Kevin Ryan, Dr Tadhg Kennedy, Dr Hugh Geaney and Dr Shalini Singh, in the Department of Chemical Sciences work on Li-ion based battery chemistries and electrodes, i.e. the chemistry of the batteries at the facility in Co. Offaly.

With studies and collaborations by a large number of academics including; Professor Edmond Magner, Professor Tofail Syed, Dr Micheál Scanlon, Professor James Gleeson, Professor Damien Thompson, Professor Michael Vynnycky, Professor JJ Leahy, Professor Dan Toal, Dr Thomas Conway, Dr Ning Liu, Dr Ronan Grimes, Dr Pat Walsh and Dr Colin Fitzpatrick, Dr Maurice Collins, Dr Teresa Curtin and Professor Michael HB Hayes, this concentration of research across the Faculty of Science and Engineering, the Bernal Institute and the Mathematics Applications Consortium for Science and Industry (MACSI) makes the University of Limerick a leader in scientific adaptation towards a sustainable future.

- *Andrew Carey*

# THE Co–SPACE STUDY: TRACKING YOUTH MENTAL HEALTH DURING COVID–19

> Researchers at University of Limerick have been examining the effects that lockdowns can have on young people's mental health, as restrictions associated with COVID–19 continue to have an impact on our daily lives.

COVID-19 has caused major disruptions to the lives of families, through social distancing measures, school closures and lockdown, all of which threaten the wellbeing of young people and their families.

In an ongoing study, researchers at UL have been exploring the impact of lockdown on the mental health of children and adolescents.

The study entitled Co-SPACE Ireland (COVID-19 Supporting Parents, Adolescents and Children during Epidemics in Ireland) is led by Dr Jennifer McMahon and a team of researchers at UL. It is a collaboration between the i-TEACH (Teaching for Inclusion) research lab, led by Dr McMahon, of UL's Department of Psychology and the Centre for Social Issues led by Professor Orla Muldoon, also of the Department of Psychology. Other team members are UL lecturer Dr Sharon Houghton, Postdoctoral researcher in UL Dr Elaine Gallagher, Dr Clióbhna O'Connor, researcher in UCC, Megan Ryan and Eibhlin Walsh – both doctoral candidates at UL.

This research is also linked to a study of the same name in the UK being led by Professor Cathy Creswell and Dr Polly Waite of the Department of Psychiatry and Experimental Psychology at University of Oxford. It is for parents/carers of children and young people aged 4-16 years and there is also an opportunity for young people aged 12-18 years to report on themselves. It involves a baseline survey and monthly follow-up surveys.

The questions are on a range of topics related to family life and relationships, overall health and wellbeing, parenting, education, psychological symptoms and how they and their child is coping during the COVID-19 pandemic.

To date, over 1800 parents and 400 adolescents have completed the study and a portion of those have been tracked at four distinct time points during the pandemic. Early findings have been published from the study through a series of research snapshots so that results can be quickly used by schools, agencies seeking to support families and children and policy makers.

The team notes that there has been fantastic engagement from schools and key agencies tasked with supporting families, such as the Department of Children and Youth Affairs, Barnardos, Incredible Years and TUSLA. The team also recently presented more than 500 public and civil servants from a range of statutory and voluntary agencies, at the request of the Government Information Service, Department of the Taoiseach.

"Increasingly researchers and practitioners are concerned about the effects of strict restrictions, such as those experienced from March to June, have on young people's mental health," Dr McMahon said.

> "Our study found that during that time their child's wellbeing was a key concern for parents. Managing their child's education was also a key concern. We also found that most support services for children with special needs and prior mental health issues had been fully withdrawn or significantly reduced and that many parents were left to cope with their child alone which is hugely concerning
>
> - *Dr Jennifer McMahon*

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The effects of the lockdown on children's mental health are not yet fully clear. The study found that during one month of lockdown that primary school children's mental health deteriorated over the course of the month. Parents saw increases in their child's emotional difficulties such as feeling unhappy, worried and clingy. However, some children with special needs and those with prior mental health issues reported improvements.

Dr Sharon Houghton, clinical psychologist in UL and researcher on the study, points to school and peer interaction as key stressors for some young people which may account for the findings but cautions that reintroduction to school will likely be accompanied by a significant upturn in anxiety and distress for these young people that will need to be addressed. >


Pictured:
Dr Jennifer McMahon

> Covid-19 has presented many challenges to our children and young people including school closures and restricted social interactions with peers
>
> - *Dr Clióhna O'Connor*

Surprisingly, adolescents reported a reduction over the course of the month in their restlessness and attentional difficulties suggesting they adapted somewhat to life in lockdown, at least in the short-term.

The key to understanding the effects of the pandemic on child and youth mental health will be to collate data from a number of sources using multiple time points. A key strength of the Co-SPACE study is that it is being conducted in a number of countries; the UK, Iran, Denmark, the US and Australia. This will allow the team to explore the global impact of the pandemic on child and youth mental health and variances from country to country.

Dr Clióhna O'Connor of UCC, who is a researcher in youth mental health, noted that "Covid-19 has presented many challenges to our children and young people including school closures and restricted social interactions with peers.

"What is important to bear in mind is that our young people were struggling with mental health difficulties prior to the onset of the pandemic and it is critical that we address these difficulties in a timely and accessible manner," she added.

Looking ahead, Dr McMahon notes that the success of the unfunded study was down to the goodwill and hard work of the team involved who saw an opportunity amidst a crisis to gather much needed data in this area. As such, the next step is to secure funding to support additional research analysis and dissemination of this valuable data, as well as cross country collaboration. - *Alan Owens*

**Summaries of the early research findings are available at the research website https://www.i-teach.ie/co-space-study**

**The study is ongoing. Interested parents can participate in the research here https://tinyurl.com/UL-COSPACE**

# UL PROFESSOR INDUCTED AS INTERNATIONAL FELLOW TO US NAK

A professor at UL is one of just three international fellows inducted into the National Academy of Kinesiology in the United States.

Professor Ann MacPhail, Assistant Dean Research in Education and Health Sciences and a faculty member in the Department of Physical Education and Sport Sciences at UL, was announced as part of an induction to the US National Academy of Kinesiology (NAK) at a virtual ceremony in September.

Ten US scholars and three international scholars were inducted to the academy, an honorary organisation composed of Fellows who have made distinguished and sustained contributions to the field of kinesiology through scholarship and professional service.

Fellows in the National Academy of Kinesiology reflect a "who's who" of eminent scholars in the field.

Professor MacPhail said it was "a true honour to be inducted to the US National Academy of Kinesiology, achieving one of the highest honours the field of Kinesiology has to offer.

"Election into the Academy is recognition of the high esteem and respect colleagues hold for my significant international scholarship and leadership in the field of kinesiology," she added.

The dual purpose of the NAK is to encourage and promote the study and educational applications of the art and science of human movement and physical activity and to honour by election to Fellow those individuals who have moved the field forward as a direct result of their scholarly and professional contributions.

President of the NAK Ron Zernicke said it was his "privilege and honour" to announce the recent induction of Professor MacPhail as an International Fellow in the NAK's Class of 2020 New Fellows.

"This distinguished cadre of scholars spans the wide diversity of the kinesiology disciplines from bench/lab scientists to social scientists," he explained.

Professor MacPhail joined the Department of PESS in September 2002 and was Head of Department from August 2012 to August 2017. Prior to joining the department, Ann was a Research Associate at Loughborough University for over three years.

Her main teaching and research interests revolve around (physical education) teacher education, instructional alignment, curriculum development, teaching, learning and assessment issues within school physical education, methodological issues in working with young people and ethnography. - *Alan Owens*

# UL RESEARCH TEAM CREATES ONLINE RESOURCE TO ANSWER CLINICAL QUESTIONS ABOUT COVID–19

> A team of researchers at University of Limerick have developed an online resource for health professionals with questions about COVID–19.

## RapidInfo4U

Is an online and social media based service offering swift responses to those health professionals dealing with the consequences of the pandemic.

The resource is intended to provide support to those with questions about their clinical practice in the context of COVID-19, who may perhaps be overwhelmed with the amount of information online.

RapidInfo4U Healthcare Repository will answer those questions, saving time for the health professionals in the process.

It has been developed by a project team who are members of the Health Implementation Science and Technology (HIST) group in the Health Research Institute (HRI), led by Alice Coffey, Professor of Nursing at the Department of Nursing and Midwifery in UL.

The project is funded by the HRB under the COVID-19 Pandemic Rapid Response Funding Call and managed by the team at UL. It aims to implement an online rapid resource repository providing individualised support for nursing and allied health professionals - physiotherapists, occupational therapists, speech and language therapists and dietitians.

The individual clinical questions will be addressed in a timely manner using rapid sourcing and evidence reviews by experienced researchers complemented by specialist clinicians.

> At the beginning of the pandemic, a national 'call to action' to qualified health professionals to support health services resulted in nursing and allied health professionals returning to practice following absence or experiencing re-assignment to different practice areas or new graduates entering the health service at the time
>
> - *Professor Alice Coffey*

"At the beginning of the pandemic, a national 'call to action' to qualified health professionals to support health services resulted in nursing and allied health professionals returning to practice following absence or experiencing re-assignment to different practice areas or new graduates entering the health service at the time," explained Professor Alice Coffey.

"Health professionals are bound by their respective codes of practice and owe patients safe standards of care but this can be challenging in a crisis, especially when professionals may be working outside of their usual scope.

These professionals are likely to require additional support to assist their confidence and competence. Within Higher education institutes and professional bodies, there are vast repositories of knowledge, expertise, and experience that can be harnessed to rapidly support these professionals as they grapple with new or emerging evidence and practice contexts," continued Professor Coffey.

> We believe that our innovation will help to reduce anxiety and build personal confidence in dealing with issues during Covid-19 but will also have wider application for professionals returning to the workplace
>
> - *Professor Alice Coffey*

"We believe that our innovation will help to reduce anxiety and build personal confidence in dealing with issues during Covid-19 but will also have wider application for professionals returning to the workplace," she added.

The project team believe that the individualised resource repository will have practical demonstrable impact on nursing and allied health professionals returning or new to work or assigned to out of scope practice and will be of benefit to professional bodies in the COVID-19 crisis and beyond.

- *Alan Owens*

**For more, see https://rapidinfo4u.healthcare.**

# UL RESEARCHER IS SOLE IRISH RECIPIENT OF ROYAL SOCIETY FELLOWSHIP

A researcher at University of Limerick has become the only Irish recipient of a University Research Fellowship from the Royal Society.

The Royal Society recently announced 38 successful University Research Fellowship candidates for 2020, with Dr Michele Conroy, an SFI Analog Devices Research Fellow at UL, successful in being appointed. The scheme was established to identify outstanding early career scientists who have the potential to become leaders in their chosen fields and provide them with the opportunity to build an independent research career.

Dr Conroy will receive a maximum of €512,243 direct costs (€649,915.9 including overheads) over 60 months for her project, the proposal title for which is 'Improper Ferroelectric Domain Wall Engineering for Dynamic Electronics'.

She explained the project was "based on producing future quantum devices where the electronic circuitry can be drawn and moved similar to the etch-a sketch kids toy. Our current electronic devices are made up of fixed components of hardware. Each component has to be produced by separate processes within extremely expensive and large semiconductor fabs."

Dr Conroy's plan is to draw the devices into ferroelectric crystals, forming regions of conduction and insulation simply by changing the strain of the material.

"In ferroelectric materials just shifting slightly the location of atoms results in the properties of that region completely changing. If we can control that shift, the end user can design exotic new nano-devices. If we don't like or need the device we drew anymore we can just wipe it and start again," she explained.

Dr Conroy currently uses the electron beam in microscopes now to shift atoms controllably so she can test out what types of designs are possible all at the atomic scale. Her Royal Society project is in collaboration with Berkeley National Laboratory and Imperial College London.

Venki Ramakrishnan, the President of the Royal Society said: "The URF scheme celebrates and rewards high calibre early career scientists throughout the UK and Ireland. While Brexit and the pandemic will have an impact on early career researchers, it is gratifying to see this year's URF scheme continuing to support talented researchers from around the world.


Pictured: Dr Michelle Conroy

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> - *Venki Ramakrishnan, President of the Royal Society*

"This is vital for sustaining the talent pipeline that the UK's science and innovation sector relies on. The scheme's alumni go on to achieve great things within their disciplines, with their research contributing to the advancement of our society."

Dr Conroy's current research is focused on magnetic devices and utilizing in-situ microscopy to investigate their dynamics. She also works on a US-Ireland SFI project investigating conducting domain walls for nano-electronic devices.

Before joining UL, she was a staff scientist at Pacific Northwest National Laboratory in Washington state. She used in-situ heating and liquid electron microscopy to investigate phases changes at the atomic scale in metal alloys and oxides.

Dr Conroy completed her PhD at Tyndall National Institute and University College Cork. Her research was focused on thin film growth and strain engineering of materials for LED devices. She was born and raised in Toronto Canada where she says her love of microscopy was inspired during a trip the local science centre. The Royal Society grant will also fund the outreach program 'under the microscope' run by the Microscopy Society of Ireland inspiring the next generation of scientists. - *Alan Owens*

# THE SHOW MUST GO ON

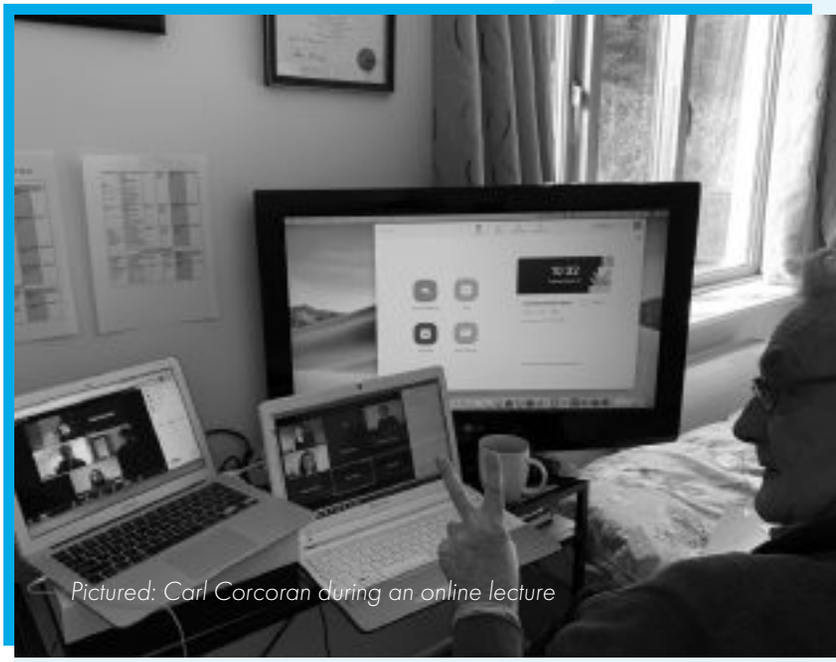
On March 12 of this year, like most in UL, Carl Corcoran left his office at the Irish World Academy of Music and Dance firm in the belief that he would return within a few weeks and that the interruption would be nothing more than an interlude. Seven months on, he writes about the new norm, traversing zoom and how the show must go on.

"During my 20-year sojourn in America, one of the regular summer delights with the 'kids' was to spend a day at 'Zoom Flume' – a water park located in upstate New York, home to a collection of rapid flowing water slides. East Durham is a small rural town located in Orange County, New York; a county affectionately nicknamed Ireland's 33rd due to its popularity with Irish emigrants and Irish Americans alike - almost equidistant from the urban centres of Boston and New York. Little did I realise back in the mid-eighties that 30 years later I'd be traversing another type of Zoom – this time an Online platform which up until mid-March of this year meant nothing more to me than a camera lens action and/or the exhilarating experience of skimming down the water slide on a hot August afternoon in the Catskill Mountains of New York.

"March 12 2020 is a day that will live in infamy. The day the University of Limerick, along with every 3rd level institution shut its doors. Students and faculty now at home, left us all facing the second half of Semester 2 in a state of flux as to how and where we were going to deliver the remaining syllabus. The MA in Songwriting (now in its fourth year) is a one-year immersion in the craft and curation of finding one's true songwriting voice. And on this infamous day, I as Course Director along with faculty colleagues were faced with the burning questions of what, when and how we would continue with our journey.

"How long would we be out was an unanswerable question. The fact that behind my office door, books, journals, CDs and an unfinished ham sandwich were abandoned, indicated that our intentions and hopes were that we would be back within a short spell – days, maybe a couple of weeks. Yep, we'll nip this virus in the bud and return to complete that which we had started back in September...the privilege and joy of encouraging and mentoring songwriters to hone their craft and find their true creative voices.

"Alas, that was not to be. We sprang into action. Our tech team led by the Academy's Dr. Alan Dormer proved themselves to be invaluable and certainly worthy of sainthood in hindsight. The UL IT Department, along with AHSS teams devised new systems throughout the university. These were rapidly upgraded, updated and upped in their capacities; we were upturned, upset and upskilled in our capabilities. That third week of March saw us presenting songwriting workshops by international songwriter Sarah McQuaid from her home in Cornwall, while my students joined from their homes in Castleconnell, Tipperary and Toronto Canada.



*Pictured: Carl Corcoran during an online lecture*

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The end of semester performances were submitted via video tapes recorded in similar locations. We had adjusted – and had succeeded.

"Now, almost seven months later Zoom and other online platforms became a daily event. Microsoft Teams were a common rendezvous location. Words like synchronous and asynchronous weren't even in my microsoft word dictionary. Now we Zoom our workshops, our tutorials, our one to one 'song checks'. We sing songs 'live' over the internet to classmates and colleagues located in various locations in Ireland and further afield.

>

And if we have sound quality issues, (or as we now refer to it as 'computer latency') there's always the phone... yep, sing the song into your phone using a high-quality sound enhancing application provided by Dolby On, email it to me.... 'bing' goes my alert, and there it is Sara's beautiful song, in all its high quality glory as if she was in the room - the result of a two-hour workshop with John Spillane – she in Galway, he in Cork, me in Dublin – and all of us in awe and wonder.

"There's no doubt about it - we are well ensconced in the 21st century. Online delivery – or in our case now, blended delivery is the norm. Four weeks of face to face, or as we now say 'f2f' on- campus lab or practical work are peppered throughout our 12-week Semester. Yes, we long for a complete return to the hallowed halls of our Irish World Academy by the Living Bridge - our sanctuary or hub of creativity, where the spirit of Academy founder Mícheál Ó Súilleabháin occupies every room, corridor, and corner.

Our Academy, where conversations in Blas Café can be just as inspiring as the workshops, lectures and seminars that take place in the studios, theatres and practice rooms.

Our Academy, where the synergy of collaboration between Masters of Songwriting and the BA in Voice and BA in Contemporary Dance is as important as the 5000-word essay on 'Post-Colonial influences in modern contemporary Irish songwriting'.

"We will return – but in the meantime we continue to inspire, nurture and encourage our songwriters in the craft of expressing their hearts and souls and thoughts; commentaries and observations of their lives, loves and losses. How many of these songs will be about or inspired by, our lockdown experiences; our enforced opportunities to meditate and muse over 'the meaning of life'.

"We will return to lunchtime concerts in the Tower Theatre and the sunset concert series showcasing intimate live performances by the visiting songwriters of note who conduct workshops and tutorials.

"We will return to the office on the second floor to scour those books and journals; and listen to those CD and Vinyls that, for now gather dust. We will return to that unfinished ham sandwich! Fear not - that 'scientific experiment' was rapidly removed by a diligent buildings department staff who lovingly took care and continue to take care of our precious Academy in our absence. - *Professor Carl Corcoran*

*The MA in Songwriting (the only one of its kind in Ireland, and only one of a handful in Ireland and the UK) is a one-year full-time postgraduate programme, which focuses on the artistic practice of songwriting with opportunities to perform and record work. The course is cognisant of the wide variety of approaches to songwriting that one might adopt and will not attempt to be a 'how we do it' but rather a 'why we do it'. This is a space where students can explore and be exposed to a range of writing techniques, whilst having the dedicated time and resources to develop their own body of work and investigate the processes used, thereby expanding their understanding of their own expression.*

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**Carl Corcoran is a 45 year veteran of the music industry - an experienced and award winning songwriter, broadcaster and music industry administrator. He began his professional career as a singer-songwriter in the 70's under the moniker of Jamie Stone. 20 years in America provided him with a wide range of industry experience before returning to Ireland to pursue a 17 year broadcasting profile with RTE lyric fm. A graduate of the MA in Community Music, he became Director of the MA in Songwriting in its inaugural year - now in its 4th year. Carl continues to write and occasionally record new material and is also a Board of Music Network Ireland.**

# NO CLOWNING AROUND AS LIVE MOVES ONLINE

Simon Thompson, lecturer on the MA Festive Arts at the Irish World Academy of Music and Dance, on the serious business of taking performance skills to the virtual world

*Pictured pre-pandemic: Dr Grant McLay, IWAMD and Simon Thompson*

The global pandemic has unfortunately touched everyone in all walks of life. For some, the impact has been professional more than personal, as COVID-19 forces a rethink in how we work, live and even perform.

For Simon Thompson, lecturer in Festival Management, Curating, Culture and Performance on the MA Festive Arts at the Irish World Academy of Music and Dance, his world was turned upside down in March.

"2020 has been a challenging year so far and each and every one of us has witnessed or experienced extremely difficult situations in a multitude of ways," explains Simon, a physical theatre practitioner who is Artistic Director at Clown Noir.

For a man who has worked predominantly in theatre and has done so as a freelance artist for the last 35 years, he admits there was a few "moments of shouting at the TV and finding comfort in banana bread, however in the main I've managed to keep it together".

Like all great equalisations in the face of upheaval, Simon found his way in "keeping busy and establishing some different routines".

"March arrived with a bang, it was coming towards the end of semester two and all my lectures moved online, not easy when you're teaching performance and trying to organise a campus wide mini festival with the students of the MA Festive Arts Course," he says.

"The annual St Patrick's Day celebrations were cancelled and a torrent of further cancellations flooded in, the diary was now empty into November. A scary prospect not just for myself, but also for the whole performing arts sector. This meant only one thing, I had to stop procrastinating and finish my dissertation. So with the head down and typing furiously, chapter upon chapter slowly emerged, only interrupted by occasional cat videos, online meetings facilitated by the evil Dr Zoom and hours of boring video footage from what should have been majestic live performances."

This proved the catalyst for a new research project, which examined if live performance can translate to the online platform.

"With the thesis submitted, I now had time to focus on a new research challenge, something to get stuck into and create a sense of purpose, structure and ultimately establish a reason to exercise my sleeping practice. It's fair to say that this research project, has potentially kept me from roaming the streets and randomly performing to strangers at bus stops or in takeaways," Simon laughs.

His most recent tranche of live to online research took place in September and October at the Belltable arts venue in Limerick city with three separate groups, emerging, mid-career and experienced artists.

With funding from Limerick Arts Office, Creative Ireland and the Arts Council of Ireland and support from Marketa Dowling, the Belltable's Programming Manager, Simon says it was "an absolute joy to be able to carry out valuable research, upskill and provide some new opportunities to fellow artists" through a structured six-day workshop, developed to enhance how an artist engages with the audience through shared experience.

"Not solely in the live context, the workshop explored how 'live' translates to 'online', asking can the lived and shared experiences of an artist and audience exist when presented through an online platform," Simon outlines.

"The cognitive learning outcomes from this workshop were focused on developing a greater understanding of how the practitioners own body moves and communicates to the observer. Now as we move into the Winter I'm collating the data and documenting the various findings from the research, these will be available soon and hopefully beneficial to those who intend to create online content," Simon adds.

Simon, a founder of the Limerick Fringe Festival who trained at Ecole LeCoq in Paris, has a suggestion for these "unprecedented times when artists and performers are finding opportunities hard to come by".

"Maybe think about working with or engaging a creative practitioner, we are problem solvers who think outside the box. Our creative minds question and look for new vibrant, exciting opportunities.

"Typically we can multi-task and work with budgets and our people skills are second to none. Every research team should have a creative on board," he adds.

- *Alan Owens*


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