DCU

Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

President's Annual Report

2018 - 2019

Contents


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MAKING AN IMPACT

DCU has been ranked in the world's top 100 universities for its positive impact on the social and economic fabric of society.

DCU was ranked 98th in the inaugural Times Higher Education (THE) University Impact Rankings, which are based on universities' impact in relation to the United Nations' Sustainable Development Goals (SDGs). This is a strong endorsement of DCU's significant national and international contribution through translational research, engagement, academic expertise and thought leadership in a range of social, economic and civic areas. In particular, DCU's performance in the areas of climate action, sustainability, health and wellbeing were singled out as factors that earned DCU this global recognition.

In its summary of the University's achievements, Times Higher Education said, "DCU's inclusion in these rankings is in itself a great achievement and it marks DCU out as a global pioneer – demonstrating the institution's commitment not just to supporting the Sustainable Development Goals through its teaching, research and knowledge transfer, but also to embodying the goals in DCU's internal practices, policies and procedures."

DCU ranked in 11 of the 17 United Nations' Sustainable Development Goals (SDGs), performing particularly well in the following SDGs:

The United Nations Sustainable Development Goals

Sara Montoya of Coop Cafer, Colombia, presents Prof MacCraith with DCU's Fair Trade Certificate, February 2019.

SDG 13: Climate Action

— **World Ranking: No. 28**

Achievements in this area include the contribution of Dr Diarmuid Tormey, School of Law & Government, as a member of the expert Advisory Group on the Citizens' Assembly on Climate Change and as key contributor to establishing DCU's MSc in Climate Change, Policy, Media and Society. The University is also an accredited Green Campus by the Federation of Environmental Education. DCU is also ranked no. 12 globally for Sustainable Campuses.

SDG 12: Responsible Consumption and Production

— **World Ranking: No. 42**

Significant developments include DCU becoming the first Irish University to go "plastic-free" in 2018, and its consistently high ranking in the global GreenMetric Rankings as a University committed to developing environmentally friendly infrastructure.

Other developments include a cross-faculty commitment to ethical sourcing of products and services and a commitment to safe and sustainable production and recycling practices with a focus on sustainability.

SDG 17: Partnership for the Goals

— **World Ranking: No. 48**

Significant achievements for DCU in this area include the establishment of Ireland's first Centre of Excellence for Diversity and Inclusion; the contribution of Dr Tanya Ni Mhuirthile to the Gender Recognition Act Review Group and subsequent legislation, and the role of the 'DCU in the Community' unit as part of public engagement.

In addition to the above, the University also scored well in achieving strong recognition for positively progressing initiatives for Quality Education; Gender Equality; Industry, Innovation and Infrastructure; Reduced Inequalities; Sustainable Cities and Communities and Peace, Justice and Strong Institutions.

RESEARCH FOR A BETTER ENVIRONMENT

RESEARCH FOR A BETTER ENVIRONMENT

DCU research is making important contributions to the way we monitor pollution, reduce carbon emissions and frame environmental policy.

Dr Alessandra Mileo developed the City Pulse framework with colleagues from across Europe

Researchers at DCU are engaged in a wide variety of projects, in collaboration with colleagues across the globe, that address the world's many environmental challenges. The work of the DCU Water Institute offers a prime example of how research can help us to understand the Biodiversity crisis.

The World Wildlife Fund's recent Living Planet Index showed an overall decline of 60% in wildlife populations since 1970, rising to 83% for freshwater species. This huge challenge highlights the need for accurate biodiversity monitoring.

A research team from DCU's Water Institute has carried out the first ever application of CRISPR/Cas technology (commonly used in genome editing), to pinpoint the presence of single species in the water by picking up the environmental DNA that organisms shed and excrete into the water. The breakthrough will have a significant impact on efforts to monitor biodiversity and manage conservation levels in Irish freshwater and marine environments. The researchers believe the findings could lead to the creation of a portable biosensor device for use in the field.

The research is led by Dr Anne Parle McDermott, Prof Fiona Regan and Molly-Ann Williams from DCU's Water Institute, in collaboration with researchers at UCD, UCC, the Marine Institute, and Dundalk IT.

Monitoring of a different kind is a key element within CityPulse, a DCU-developed digital framework that makes commuting more efficient and environmentally friendly. CityPulse can increase bus frequency to meet demand, tell pedestrians which routes have least air pollution and inform motorists which routes will result in lower CO2 emissions. It does this by analysing huge amounts of data, including live weather, real-time bus and train information, and social networks like Twitter. Dr. Alessandra Mileo (DCU School of Computing; Insight) has developed the framework with colleagues from across Europe, and it has been trialled in Aarhus in Denmark, Stockholm in Sweden and Brașov in Romania. Developers can use the open source CityPulse framework to build smartphone apps.

When it comes to Climate Action and the environment, the work of DCU researchers is not confined to the STEM disciplines. The All of Government Climate Action Plan 2019 singles out significant research by DCU academics in the School of Law and Government, and the School of Communications, which explores a new model for citizen engagement on climate change. The Citizens' Climate Research Project, funded by the Environmental Protection Agency, is being conducted by Prof Pat Brereton (School of Communications), Dr Diarmuid Torney, Dr. Laura Devaney and Martha Coleman (School of Law and Government). The project seeks to identify lessons from the climate change deliberations of Ireland's Citizens' Assembly for policymaking and citizen engagement on climate change, as well as producing new knowledge on Ireland's climate change governance.

Research in Brief

DCU research has made advances in a wide range of disciplines in the past year.

DCU research is key to cancer clinical trial

Following research at DCU's National Institute for Cellular Biotechnology (NICB), a new drug combination to treat women with metastatic HER2-positive breast cancer has entered clinical development. The Phase 1 clinical trial, named CAROLINE-1, builds on laboratory research at the NICB that demonstrated the benefit of combining a drug called neratinib with standard HER2 antibody therapies. Ireland is the first country to assess the new combination in women with metastatic HER2-positive breast cancer.

New cancer treatment trials have commenced, based on research at DCU's NICB

Ireland's first research centre for Early Childhood Education

In 2019, DCU launched Ireland's first ever dedicated research centre for early childhood last night. The **Early Childhood Research Centre (ECRC)** at DCU's Institute of Education aims to place Ireland at the centre of the global map of early childhood research. The centre will actively promote close collaboration between research, policy and practice in the field, both nationally and internationally. The creation of the centre follows the appointment of Professor Mathias Urban as the Desmond Chair in Early Childhood Education in 2017.

Dr Jane Suiter

Leading the charge against 'Fake News'

Researchers at the DCU Institute for Future Media and Journalism (FuJo) are leading a €2.4 million EU project to tackle the issue of "fake news". The PROVENANCE project is funded by the European Commission's Horizon 2020 programme and will focus on finding solutions to enable people to distinguish between original information and manipulated information or content that is deliberately created and spread to influence public opinion or obscure the truth. PROVENANCE will be led by Dr Jane Suiter, Associate Professor at FuJo.

THE FUTURE OF LEARNING

THE FUTURE OF LEARNING

The way we learn, access to education and the way we award learners is undergoing a revolution, and DCU is at the forefront of change.

In June 2019, DCU announced a new global strategic partnership with the international online learning platform FutureLearn. FutureLearn is jointly owned by The Open University and The SEEK Group, and has over nine million people signed up worldwide.

The collaboration is a key component of the University's plan to reach learners worldwide. It allows DCU to offer a range of short and longer accredited courses - from microcredentials to postgraduate degrees aimed at working professionals and global learners. The courses will cover a wide variety of subjects: from aArtificial Intelligence to Irish Language and Culture, to FinTech for Business Leaders.

The international figures show just how important digital learning has become, and indicate the opportunities the FutureLearn partnership offers. In 2019, almost 30% of US University students (over 6 million) were studying online. Globally, it is estimated that 80 million people worldwide have registered for a free online course, or MOOC, through one of the major digital education platforms and this almost doubles when local platforms from India and China are taken into account.

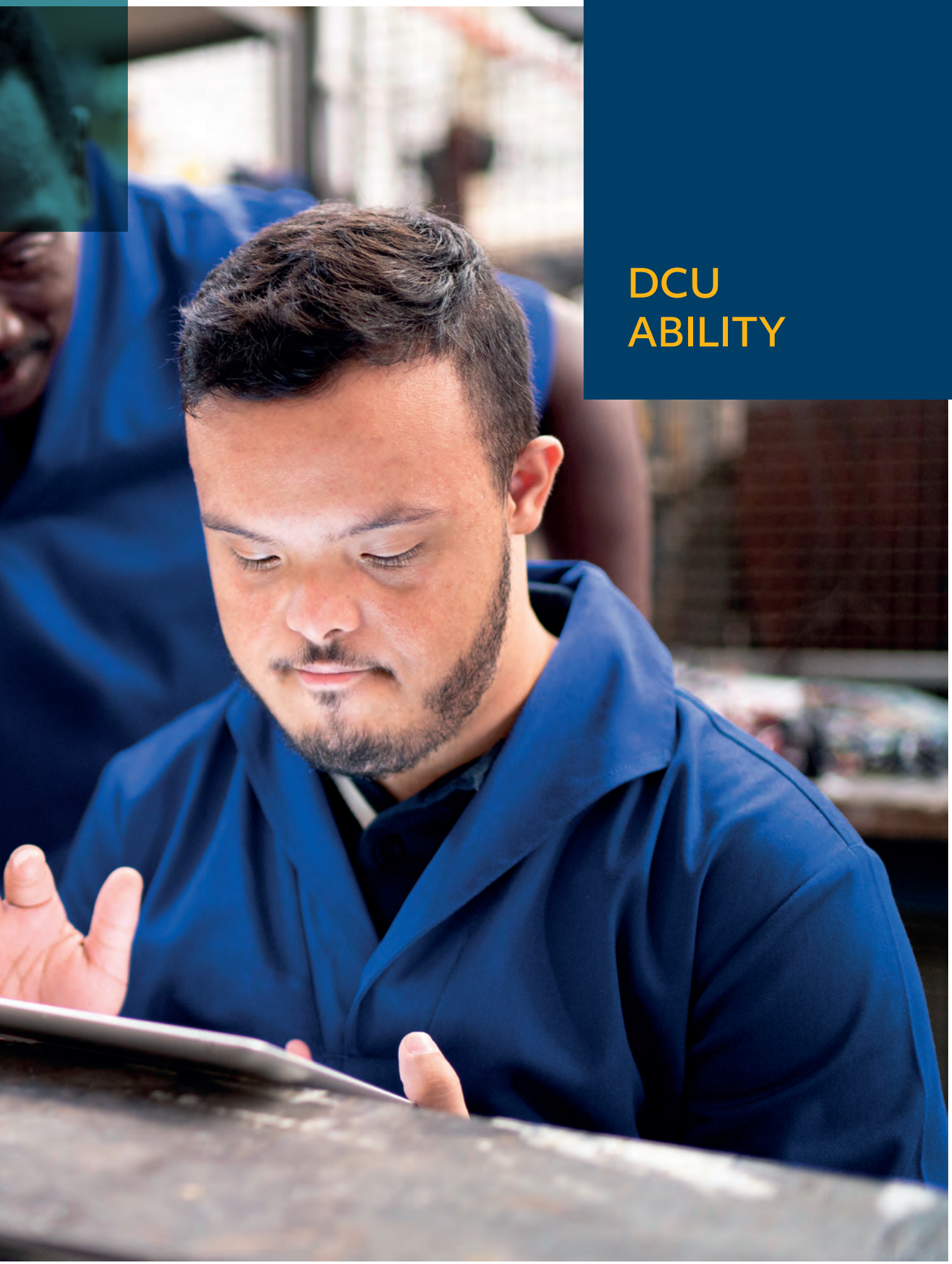
DCU has a long track record of pioneering online education.

The FutureLearn partnership builds on DCU's long track record of online education. The University hosts the National Institute of Digital Learning (NIDL), and its DCU Connected online courses have allowed thousands of students to earn degrees while studying at home. Over 45,000 learners from 136 countries have already participated in DCU's suite of online Irish Language and Culture short courses, Fáilte ar Líne, which is hosted on the FutureLearn Platform.

During the year, DCU also launched a number of highly innovative online and blended Master's degree programmes, to cater for Ireland's growing demand for these specialist tech skills. These included the Master's in Artificial Intelligence and the Master's in Internet of Things (IoT). The two-year programmes were developed by Technology Ireland ICT Skillnet and Technology Ireland Software Skillnet in collaboration with DCU. Both degrees will be delivered part time, over two years and are primarily taught online. The University also launched Ireland's first Master's in Blockchain (Distributed Ledger Technologies). The programmes are aimed at IT professionals working in the Republic of Ireland.

Around the world, learners are using online platforms to upskill and advance their careers.

DCU ABILITY



DCU ABILITY

A new initiative at DCU seeks to remove the obstacles that prevent young people with disabilities from finding employment

Inclusion has always been at the heart of DCU's values. One of the University's newest initiatives in this regard is DCU Ability, which aims to help young people overcome the barriers excluding them from the workforce. The programme aims to do this by offering them opportunities they need to be 'career-ready'.

Employment and, indeed, unemployment, is a major issue for people with disabilities. DCU Ability aims to create meaningful and tailored pathways into education, training and employability, using a person-centred approach. The programme offers structured training programmes, work experience and reflective learning reviews, as well as longer term support and career mentoring.

The programme was launched in December 2018, to mark International Day of Persons with Disabilities. It is a partnership between DCU and St. Michael's House and is open to people with disabilities, aged 18 to 29.

The launch of the programme builds on a wide range of inclusion initiatives at DCU. These include the University's designation as the world's first Autism-friendly University, as well as our leadership of the Age-Friendly University initiative. DCU was also the first Irish University

Launching DCU Ability (left-right): Martin Lyes, Director, St Michael's House; Finian McGrath TD, Minister of State for Disability Issues; Joanne O'Riordan, disability rights campaigner and journalist; Prof Brian MacCraith, President of DCU.

to be designated as a University of Sanctuary, offering support and educational opportunities to refugees and asylum seekers.

The DCU Ability Programme also builds on Irish Government strategy with regard to people with disabilities. This aims to build skills, increase capacity and independence, and provide bridges and supports into work. It also seeks to increase the support and engagement of employers so as to provide co-ordinated support for this group of citizens.

PICTURE THIS - A YEAR AT DCU

Explorer Mark Pollock launches the DCU Exoskeleton Programme at The Helix in September 2019, with service user Jennifer Hester.

DCU Student Ambassadors attend the launch of Access to the Workplace, a new work placement scheme developed by DCU Educational Trust and DCU's Access Service

Prof Brian MacCraith joins Ireland Rugby Head Coach Joe Schmidt and sports broadcaster Micheál Ó Muircheartaigh after they were conferred with Honorary Doctorates from DCU in April 2019.

Singer-songwriter David Keenan plays All Hallows Chapel as part of the 2019 ANAM Festival.

DCU students celebrate Holi, the Hindu festival also known as the Festival of Colours or the Festival of Spring

In November 2018, Seamus Heaney's wife, Marie, and his children Christopher, Catherine and Mick, attended the official opening of the Seamus Heaney Lecture Theatre and unveiling of a new portrait of the poet by Colin Davidson, at DCU St. Patrick's Campus.

SPACE, THE NEXT FRONTIER

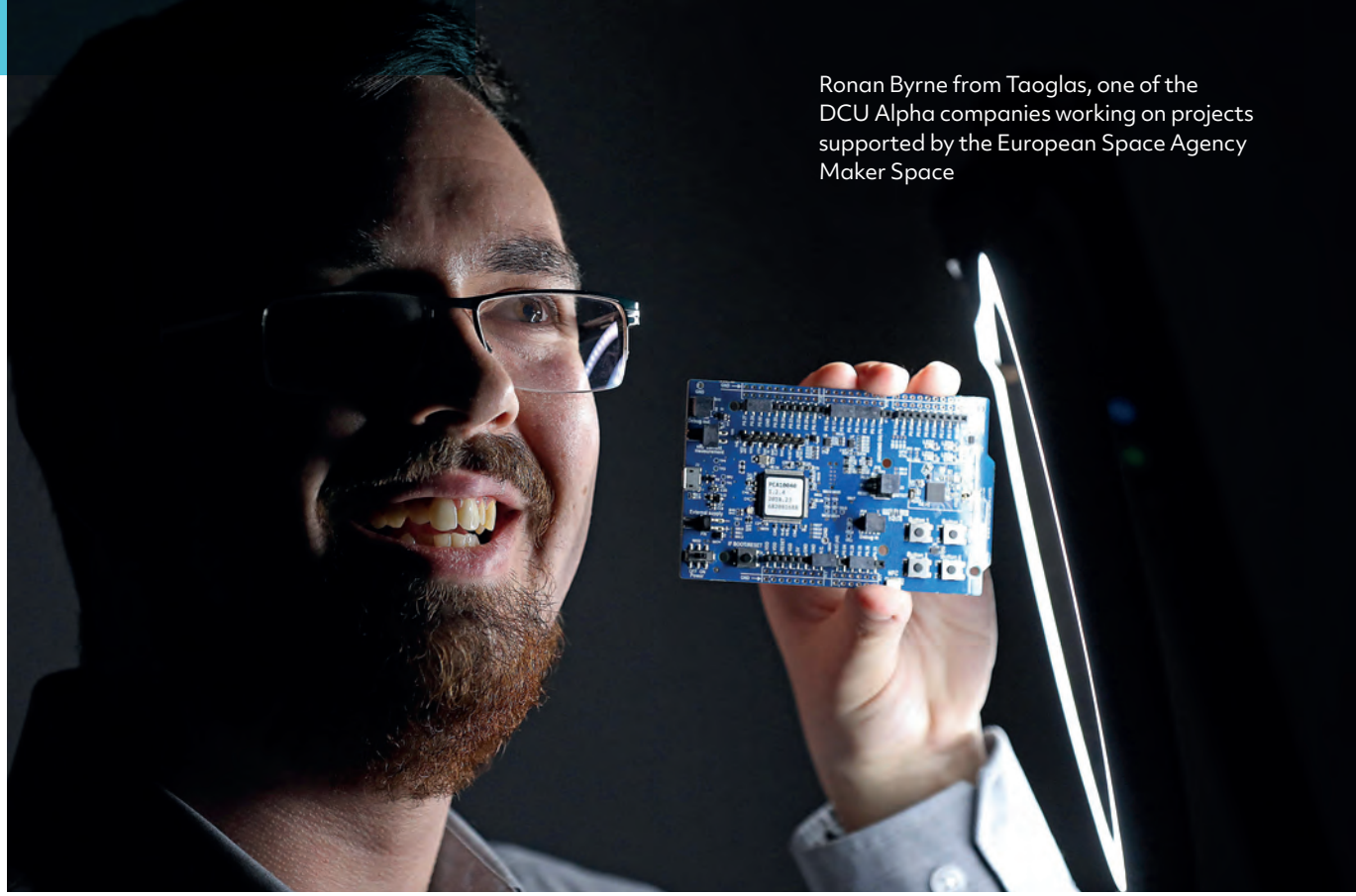
SPACE, THE NEXT FRONTIER

Research in space-related disciplines can tell us so much about where we come from and where we're going. In the past year, DCU research in areas such as space communication technology and astrophysics has been prominent.

In November 2018, DCU welcomed back NASA astronaut Shane Kimbrough, who captivated his audience with stories of space exploration. Shane told a packed Helix about the thrills and challenges of spending 189 days in space and doing 39 hours of spacewalks. It may not be quite so dangerous or high profile as a NASA mission, but DCU's reputation for space-related research and innovation has seen major advances in recent years.

The significance of the University's space research is illustrated by DCU's involvement in a major breakthrough in our understanding of Black Holes. Researchers from DCU's Centre for Astrophysics and Relativity (CfAR) are part of an international team that has developed an entirely new model to explain the existence of these mysterious phenomena.

Among the students Shane Kimbrough met at DCU were pupils from St. Aidan's CBS, Donabate Community College, and DCU's Centre for the Talented Youth, Ireland (CTYI).



Ronan Byrne from Taoglas, one of the DCU Alpha companies working on projects supported by the European Space Agency Maker Space

Dr John Regan and Prof Turlough Downes collaborated on the project with researchers from Georgia Institute of Technology, Michigan State University, the University of California at San Diego, the San Diego Supercomputer Center and IBM.

The team showed that when galaxies assemble extremely rapidly, and sometimes violently, it can lead to the formation of a massive black hole.

The rapid assembly of gas means that instead of normal star formation proceeding, embryonic stars become puffed up by hot gas. This leads to the formation of what is called a "supermassive" star which quickly collapses, forming a massive black hole. The new study turns upside down the long-accepted belief that massive black hole formation could only happen in regions bombarded by powerful radiation from nearby galaxies.

As well as its research in the Astrophysics realm, DCU expertise regarding the health and wellbeing of astronauts has been recognised. In December, The European Space Agency (ESA) announced the appointment of DCU's Prof. Donal O'Gorman to the ESA Medical Board. This is the first time Ireland has been represented at this level.

Prof. O'Gorman is an exercise physiologist who has been working with the ESA to investigate the changes that take place in the body due to inactivity. During spaceflight, astronauts experience changes in their bodies that are similar to accelerated ageing. This work is helping us understand how metabolism can be regulated in the microgravity of space and this information is also being used to learn about ageing and age-related diseases on Earth.

Meanwhile, DCU Alpha, the University's innovation campus has become a launchpad for a whole range of space-related startups. The campus has played host to a highly successful 'Maker Space' supported by the European Space Agency (ESA) and Enterprise Ireland. Participating companies developing prototypes in the areas of Satellite Communications (Satcom) and Internet of Things (IoT) technologies. To date, 8 Irish companies have successfully completed ESA-designed challenges and three-quarters are earmarked for further collaborations and projects with ESA. If successful, these follow-on projects could garner up to €1.5 million in additional technology development funding.


DCU
President's Awards for Innovation 2019
Student Category
Winner: Eva Vanmassenhove
Addressing Gender in Machine Translation
DCU

PRESIDENT'S AWARDS 2019

Recipients of the President's Awards for Innovation and President's Awards for Engagement, 2019.

President's Awards for Innovation

The Academic and Research Category Award was won by **Dr Finbarr O'Sullivan** from the National Institute of Cellular Biotechnology (NICB). Dr O'Sullivan's research has focussed on addressing sight loss, and in particular on the development of cultured cornea-limbal stem eye cells to regenerate the cornea surface for the treatment of patients.

In the Student Category, PhD student, **Eva Vanmassenhove** took the award for her work on tackling the issue of gender bias in machine translation.

Undergraduate Computer Applications student, **Kevin Cogan**, was also an award-winner for his Dyslex-E programme. This application creates a dyslexic-friendly online environment to reduce the number of reading errors on screen, and increase user reading speed and accessibility.

President's Awards for Engagement

Dr Elizabeth Mathews, from the School of Inclusive & Special Education, was winner of the Staff Category. Dr Mathews has been working with the deaf community since 2003. During her time at DCU, Dr Mathews has made a leading contribution to the opening of BEd Irish Sign Language (first of its kind in Ireland), and the development of an ISL STEM glossary, as part of an SFI-funded project.

A Special Merit Award went to **Prof Barry McMullin**, from the School of Electronic Engineering, for his public policy engagement and leadership in the area of climate change and sustainability.

The Student Category Award went to Austin Campbell (MSc PR and Strategic Communications) for My Streets - a social enterprise that engages homeless trainees on a three month programme based around storytelling and confidence, creative writing and tour guiding skills delivered by professional trainers.

A Special Merit Award went to **Jennifer Harrington** (School of Mechanical and Manufacturing Engineering) for her role in promoting the greater female participation in engineering through activities such as establishing the DCU Women in Engineering Community and organising the Women in Engineering Open Day at DCU.

Recipients of the President's Awards for Excellence in Teaching 2019

President's Awards for Research and Research Impact

The recipients of the 2019 President's Awards for Research were as follows:

Dr James J. Walsh (School of Chemical Sciences). For his research into a new method of turning atmospheric CO2 into liquid fuels, Dr Walsh was presented with the DCU President's Research Award for Early Career Research Staff

Dr Jane Suiter (School of Communications). For her research on data-journalism including issues such as the rise of 'Fake News', Dr Suiter was the recipient of this year's President's Research Award in the area of Humanities and Social Sciences, Business, Education and related areas.

Prof Gabriel Muntean (School of Electronic Engineering). For work that includes research to improve communications in Internet of Things networks, Prof. Muntean was the recipient of this year's President's Research Award in Natural Sciences, Health, Engineering and related areas.

The inaugural President's Awards for Research Impact were also presented at the ceremony. For the purpose of the awards, "research impact is understood as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment, or quality of life, beyond academia". The recipients were:

Prof Kate Irving (School of Nursing and Human Sciences). For the extensive range of work she has done and continues to do on the dementia service and policy landscape in Ireland.

Prof Regina Connolly (DCU Business School). For the impact of a report that she prepared for the Department of Agriculture aimed at Improving ICT uptake and reducing the Digital Divide in Agricultural and Rural Communities.

President's Awards for Excellence in Teaching

Teaching Excellence Award: **Anne Kirwan**, School of Nursing and Human Sciences.

Teaching Support Award: **Shirley O'Brien**, Open Education Unit/DCU Connected.

Team Award: DCU Careers Service, Student Support and Development.

Distinctive Approaches to Teaching Award: **Dr Eabhnat Ní Fhloinn**, School of Mathematical Sciences.

Distinctive Approaches to Assessment & Feedback Award: **Dr David Robbins**, School of Communications.

Distinctive Approaches to Innovation in Teaching Award: **Paula Murphy**, School of Arts, Education & Movement.

New Lecturer/Tutor Award: **Padraig McKeon**, School of Communications.

Recipients of the President's Awards for Research and Research Impact 2019

GOVERNING AUTHORITY MEETINGS

The DCU Governing Authority met on six occasions in 2018/2019 on the following dates:

— 25th October 2018
— 7th December 2018
— 14th February 2019
— 25th April 2019
— 27th June 2019
— 5th September 2019

The attendance record for each member of the Authority was as follows:

Authority Member	Attendance Record
Dr Martin McAleese (Chancellor)	6/6
Prof Brian MacCraith (President)	6/6
Prof Eithne Guilfoyle	3/6
Dr Declan Raftery	6/6
Ms Brid Horan (Chair Audit Committee)	5/6
Prof Dorothy Kenny	6/6
Prof Gary Murphy	4/6
Dr Caroline McMullan	6/6
Dr Noel Murphy	5/6
Dr Jean-Paul Mosnier	6/6
Mr Michael Burke	6/6
Ms Orla Nic Aodha	5/6
Ms Sharon McCooey	4/6
Ms Rachel Hussey	6/6
Mr John Power (Chair DCU Commercial)	6/6
Ms Bernie Gray (Chair Risk Committee)	5/6

Authority Member	Attendance Record
Mr Pat Gilroy	3/6
Mr Terence O'Rourke (Chair Strategic Finance Advisory Committee)	6/6
Ms Lynette Fay	2/6
Mr James Corcoran	2/6
Ms Deirdre O'Connor	4/6
Dr Mary Shine Thompson	6/6
Ms Karen Furlong (Resigned on 14th Feb 2019)	3/3
Ms Vito Moloney-Burke (Resigned on 25th April 2019)	4/4
Ms Aisling Fagan	5/6
Mr Peter Brennan (Resigned on 25th April 2019)	0/4
Ms Kara McCann	5/6
Ms Kathy Quinn	5/6
Ms Christine Farrell (Appointed 27 June 2019)	2/2
Mr Patrick Rodgers (Appointed 27 June 2019)	0/2

INCOME AND EXPENDITURE ACCOUNT
FOR YEAR ENDED 30 SEPTEMBER 2019

	2019 € '000	2018 € '000
INCOME		
State Grants	50,848	47,300
Student Fees	89,082	88,295
Other Income	8,106	6,860
	148,036	142,455
Research Grants and Projects	51,909	49,086
	51,909	49,086
Total Income	**199,945**	**191,541**
EXPENDITURE		
Academic Faculties and Departments	83,579	78,155
Academic and Other Services	8,409	8,028
Premises	12,369	12,364
Amount Allocated for Capital Purposes	2,682	7,001
Central Administration and Services	17,498	15,566
General Educational Expenditure	996	1,027
Student Services	8,277	7,998
Miscellaneous Expenditure	14,206	12,305
	148,016	142,444
Research Grants and Projects	51,909	49,086
	51,909	49,086
Total Expenditure	**199,925**	**191,530**
Surplus on Activities before Amortisation of Capital Reserves and Grants and Depreciation of Fixed Assets	20	11
Depreciation of Fixed Assets	(13,219)	(11,830)
General Reserve movement	13,219	11,830
Surplus for the year	20	11

BALANCE SHEET
AS AT 30 SEPTEMBER 2019

	2019 € '000	2018 € '000
FIXED ASSETS	348,373	357,847
INVESTMENTS	1	1
CURRENT ASSETS		
Cash on hand and at bank	26,848	46,030
Term Deposits	74,016	-
Debtors and Prepayments	93,795	86,384
Stocks	208	207
	194,867	132,621
Less: CURRENT LIABILITIES		
Creditors and Accrued Expenditure	165,355	152,005
NET CURRENT ASSETS/(LIABILITIES)	29,512	(19,384)
LONG TERM LIABILITIES		
Creditors due after one year	75,789	23,818
	302,097	**314,646**
REPRESENTED BY:		
General Reserve	301,707	314,276
Revenue Reserve	390	370
	302,097	**314,646**

The University Financial Report excludes the results and net assets of subsidiary undertakings.

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