



**Ollscoil
Mhá Nuad**
Ollscoil na hÉireann
Má Nuad

MAYNOOTH UNIVERSITY RESEARCH AND INNOVATION REPORT 2020

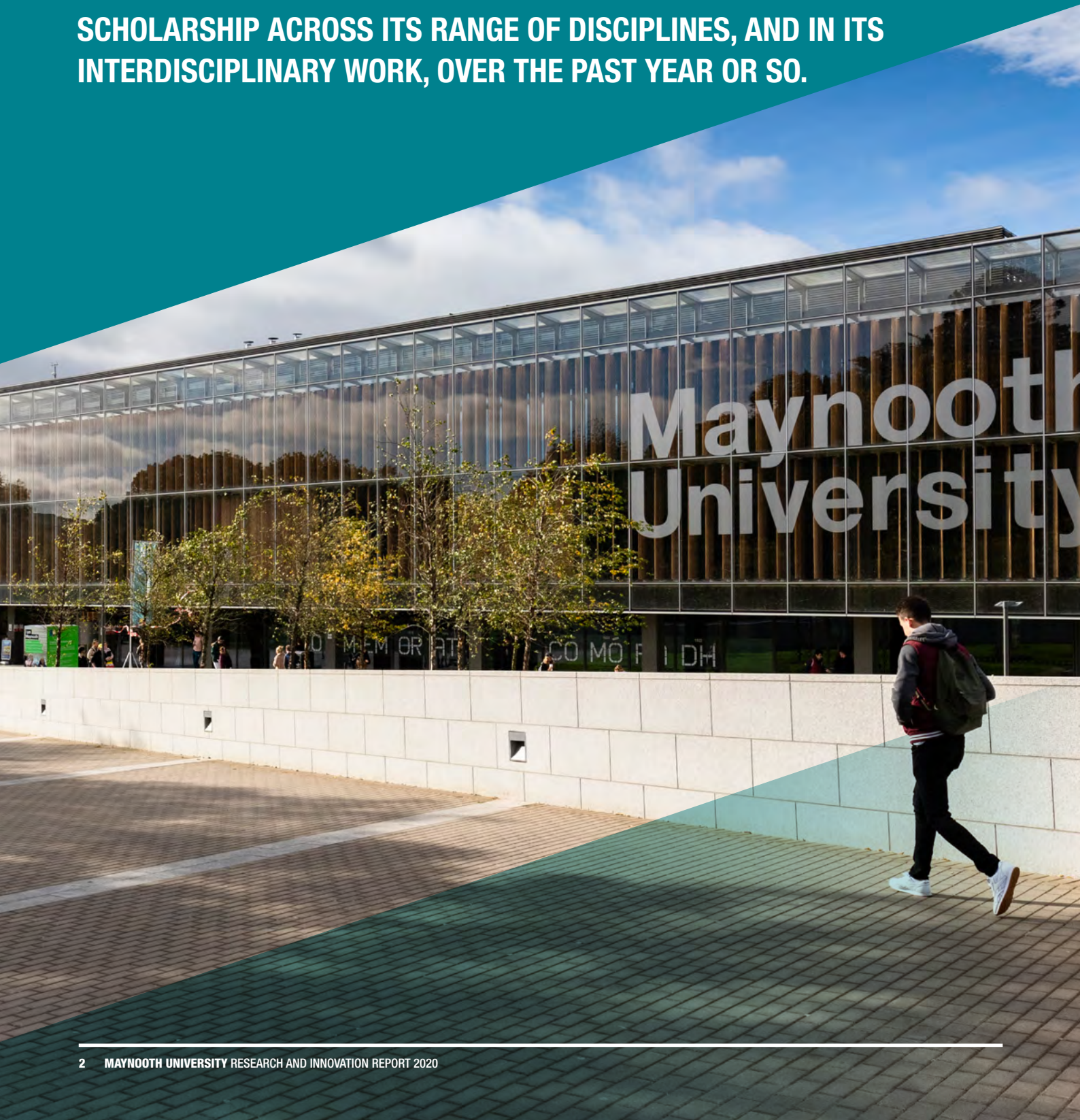


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INTRODUCTION

IT IS A PLEASANT TASK, EVEN IN DIFFICULT TIMES, TO INTRODUCE THE 2020 ANNUAL REPORT ON RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY. THE REPORT SERVES TO HIGHLIGHT THE UNIVERSITY'S NOTABLE ACHIEVEMENTS AND POINTS OF PRIDE IN RESEARCH AND SCHOLARSHIP ACROSS ITS RANGE OF DISCIPLINES, AND IN ITS INTERDISCIPLINARY WORK, OVER THE PAST YEAR OR SO.





**Professor Philip Nolan,
President**

As the world endures the covid-19 pandemic and seeks to limit its effects, there has surely been a reinforcement of the importance of deep and multi-faceted expertise to address urgent global issues. These include responses to pandemics (and preparation for future pandemics), societal inequality, or climate change. Universities have a unique role to play in this regard, and university research must be to the fore.

It is through our research activities that deep expertise and understanding is developed, and keeps developing. It is through participation in significant national and international networks, and through wide and open scrutiny, that we ensure the questions we address, and the answers we formulate, are grounded, important and relevant. And, of the very greatest importance, it is through research participation that we ensure a considered understanding of the hard-won knowledge and methods that are of greatest value in the education of our students. With the covid-19 crisis the importance is sharply accentuated of the importance of university graduates who are capable, well-informed, thinking citizens. This is what we strive for at Maynooth.

Maynooth was formally established as an autonomous, public university in 1997, but the institution traces its origins to the foundation of the Royal College of St. Patrick in 1795; from these deep scholarly roots has grown a dynamic research university which in 2019 was placed in the global top 350 universities in the Times Higher Education World University Rankings. While rankings of this type may be of questionable value, this particular ranking is based largely on verifiable measures of quality of research and scholarly activity, and it places Maynooth squarely in the top 3% of universities worldwide.



**Professor Ray O'Neill,
Vice-President for Research and Innovation**

This report presents an annual snapshot of high quality research, scholarship and innovation achievements across the three Faculties of the University, and in our major interdisciplinary research institutes and centres. Maynooth's research makes a strong contribution to Ireland, and to the international community of knowledge, and it is critical to the excellent education we offer to our students. It is a sustaining and ongoing source of pride for the University.

Philip Nolan,
President

Ray O'Neill, Vice-President
for Research and Innovation

PURPOSE

Maynooth University is a public research university dedicated to people, ideas and culture, a scholarly community working together to inquire and discover, to teach and learn, to create, conserve, disseminate and apply knowledge, and engage with the challenges that face modern society; through all these things in combination, we are central to innovation, economic growth, social development and cultural vibrancy, and are essential to a free, open, equal, democratic and sustainable society.

VISION

Maynooth University will further advance its international standing as a leading research university, with a vibrant postgraduate community, a distinctive undergraduate provision, a comprehensive and ethical approach to internationalisation, and extensive engagement with external partners; we will be recognised for our commitment to the public and civic mission of the University, as a national leader in equality and diversity, an excellent place to learn and work, an inclusive community where students and staff can flourish, and as making a distinctive contribution to the national system of higher education and the public good.

RESEARCH HIGHLIGHTS

UNIVERSITY RANKINGS

300-351

Times Higher Education World University Rankings 2018

50TH IN THE WORLD

Times Higher Education Young University Ranking 2018

TALENT DEVELOPMENT 2018/19

115 NEW POSTGRADUATE RESEARCH STUDENTS

88 PhD and 15 Professional Doctoral students
20 Research Masters

86 RESEARCH GRADUATES

70 PhD and 2 Professional Doctoral students
15 Research Masters

66 POSTDOCTORAL RESEARCHERS

PUBLICATIONS & IMPACT 2018

34

Books published

542

Publications listed in Scopus

52.7%

Publications with international collaborators

4.7%

Publications with industry collaborators

102

Book chapters

1.71

Scopus field weighted citation impact 2014–18

5

Publications highly cited in field including 1 hot paper: 2018 Web of Science

15.1%

Of 2018 publications in top 10% of cited publications worldwide (field weighted)



INNOVATION & IMPACT 2018

60

New collaborations with Industry

33

Number of client companies supported in the incubator

7

Licence Agreements

7

Patents filed

12

Number of invention disclosures recorded

RESEARCH GRANTS AWARDED 2018/19

175

Research grants

€21,350,595

Total Value of research grants awarded

RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY



RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY

In 2020, as the world endures the covid-19 pandemic and seeks to limit its effects, there has been a reinforcement of the importance of deep and multi-faceted expertise required to address urgent global issues such as responses to covid-19, societal inequality, or climate change. Universities have a unique role to play in this regard, and our research programmes must be the vanguard. Four events in 2019 at Maynooth were particularly notable in building the University's interdisciplinary research capacity.

In October 2019 Maynooth University officially launched the Kathleen Lonsdale Institute for Human Health Research, with Professor Paul Moynagh as founding director. The institute, which is located on the Maynooth north campus, takes a uniquely integrated approach to address some of the major health problems of today, including obesity and antimicrobial resistance, as well as researching many chronic inflammatory diseases like Crohn's and ulcerative colitis. The primary objective of the institute is to study key determinants of human health from childhood to adulthood, through to old age, and researchers at the institute will explore how environmental, psychological, behavioural and biological factors affect health.

The new institute initially comprises 34 research groups featuring over 100 researchers from disciplines such as Biology, Chemistry, Psychology, and Computer Science as well researchers from other Maynooth University departments. While most of the groups will focus on the biology of diseases and treatment, researchers will also examine the various factors across the life course that determine health. A key objective of the institute is to carry out collaborative research with Irish-based industries.

The institute is named after Kathleen Lonsdale who was born in 1903 in Newbridge in Co. Kildare. Lonsdale was a pioneer in using X-rays to study crystals, a technique that can be used across disciplines to discover novel drug targets. As a female scientist in the field of chemistry and physics, she was ahead of her time and having made seminal findings in these areas at the start of her career, she later applied this expertise to the study of medical issues.

In November 2019 the ALL (Assisting Living & Learning) Institute launched SHAPES, a €21 million European Commission funded health research project – the largest ever Horizon 2020 health grant led by an Irish university. The research project consists of a consortium of 36 partners across 14 European countries, and will run for four years.

The SHAPES acronym stands for Smart and Healthy Ageing through People Engaging in supportive Systems, and Irish partners include UCC and Access Earth Ltd (a Maynooth Campus Company); along with the University of Ulster and the Northern Health and Social Services Trust, in Northern Ireland.

SHAPES will undertake research aimed at helping Europe's ageing population to live actively and independently at home in their communities with the support of assisted living technology.



SHAPES, the European Commission funded health research project, was launched in November 2019.

ALL Institute members from Maynooth involved in the project are: Mac MacLachlan, Michael Cooke, Melanie Labor, Deirdre Desmond, Rebecca McGuire (Psychology), Delia Ferri (Law), Rudi Villing (Engineering), Jamie Saris and David Prendergast (Anthropology).

Citizens in a rapidly ageing European population are at greater risk of cognitive impairment, frailty and multiple chronic health conditions with considerable negative consequences for their independence, quality of life and for the sustainability of health and care systems. SHAPES recognises that a technology platform for smart and healthy ageing (SHA) has to work in different ways for different people. Older individuals will be attracted to and use the SHAPES Platform (the Platform) because it makes life easier for them, prevents difficulties, or helps to manage them; be they psychological, social, medical, or otherwise.

Also in November 2019, Professor Delia Ferri of the Department of Law, and member of both the ALL and Social Sciences Institutes, was awarded a European Research Council Consolidator award of €2M to explore ways for Europe to remove barriers and improve the means for people with disabilities to participate in cultural activities. This is the fifth ERC award to have been won at Maynooth over the last ten years. Maynooth has won or hosted a total of six ERC awards (out of a total of approximately 100 in Ireland), so Professor Ferri's achievement is exceptional within the University and the country.

Professor Ferri will lead a team of five researchers on the project entitled 'Protecting the Right to Culture of Persons with Disabilities and Enhancing Cultural Diversity through European Union Law: Exploring New Paths'. The team will also include dancers, choreographers and a filmmaker to develop a range of artistic elements of the project.

RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY

The research addresses the right of persons with disabilities to take part in cultural life as an essential aspect of enhancing cultural diversity. In doing so, it will bridge, in a groundbreaking way, the implementation of the UN Convention on the Rights of Persons with Disabilities (CRPD) and the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions. The project is premised on the idea that cultural exclusion of people with disabilities has not only engendered their marginalization, but it also has resulted in lost opportunities for society more broadly.

Lastly, in March 2019 Science Foundation Ireland launched a number of national Centres for Research Training in the broad area of digital and data technologies. Two of these new centres will provide training, in close collaboration with enterprise, for more than 70 doctoral students at Maynooth over the next five years in areas of identified skills need for Irish society and its economy.

The *SFI Centre for Research Training in Foundations of Data Science* is a joint initiative of Maynooth University, University College Dublin and the University of Limerick, with the support of Skillnet Ireland underpinning its industry and enterprise engagement. The Centre was awarded a total of €21 million, including industry and university contributions to train 139 PhD students towards a world-class foundational understanding of Applied Mathematics, Statistics, and Machine Learning. This represents the largest ever investment in mathematical sciences research in Ireland.

With Professor James Gleeson at UL and Associate Professor Claire Gormley at UCD, the Centre is co-led by Professor Ken Duffy, the director of the Maynooth University Hamilton Institute, where it will train 46 data scientists who will not only be capable of applying existing methodologies, but will be equipped with the core knowledge required to create bespoke methodological innovations for turning unforeseen data sources into knowledge. The centre commenced its intake in September 2019 and will initially have 25 research supervisors from the Hamilton Institute membership, drawn from the Department of Mathematics and Statistics, Department of Computer Science, the National Centre for Geocomputation, Department of Electronic Engineering and the Department of Chemistry.

Dr Deirdre Desmond, Associate Professor in the Department of Psychology and co-director of the Assisting Living and Learning Institute (ALL) Institute, will lead Maynooth's participation in the *SFI Centre for Research Training in Advanced Networks for Sustainable Societies*. Five Higher Education Institutes (HEIs) are collaborating in this Centre: Maynooth, CIT, UCC, TCD and TU Dublin. Local authorities, companies, NGOs, and an international network of collaborators will also take part in the initiative to meet the technical and societal challenges of global hyper-connectivity.

The Centre was awarded more than €13.8 million in total, rising to €18 million including industry contributions. The partnership Centre will train doctoral students to seek solutions to the technical and societal challenges of global hyper-connectivity; 24 of the centre's 120 students will be based at Maynooth. Fourteen initial Maynooth supervisors are drawn from STEM and Social Sciences disciplines, including Psychology, Electronic Engineering, the Hamilton Institute, Law, Mathematics and Statistics, and Sociology, and many are members of the ALL Institute.

Interdisciplinary initiatives of this type are extremely important, and they have significant potential for wide impact, but all such initiatives are built in the first instance on the deep disciplinary knowledge that is embodied in our 28 academic departments and schools.

In 2018 Maynooth University researchers published 606 refereed journal articles, 42 books, 182 book chapters, and 36 policy reports. In addition, 21 books and collected editions were edited by Maynooth experts.

Approximately two-thirds of the University's research output is recorded in the Scopus database. That is far from the whole picture, since Scopus is relatively incomplete in its record of monographs and book chapters, and those publication forms are of particular significance in the Arts, Humanities and Social Sciences. Even though it is incomplete, the Scopus record is the one by which Universities are now most frequently benchmarked, and so we will pay attention to it here.

Between 2014 and 2018 the Maynooth publication numbers recorded in Scopus were relatively constant, with between 500 and 550 publications in any year. Any one year represents only a snapshot, however, with inevitable fluctuations, and so it makes sense to look at the university's progress over a longer timescale. In total, over the five years 2014-2018 Maynooth University researchers authored 2763 publications that were captured in the Scopus database. These publications had a field weighted citation impact¹ (FWCI) of 1.70, the fourth highest of the Irish universities over that period (the highest being University College Cork at 1.85). The field weighted citation impact is a useful measure of the quality of publication output of the university as a whole.

Other measures of the quality of Maynooth publications between 2014-2018 is that 13.2% were in the top 10% of cited publications worldwide, 2.2% were in the top 1% most cited, and 29% were in the top 10% of journals (citescore). In 2018, 17% of MU's publications were in the top 10% of cited publications in their field worldwide, and 3.6% in the top 1% of cited publications (field weighted).

The total value of new research grants awarded to the University in 2018/19 amounted to €21.3M which includes €19M in direct and

¹ The FWCI is a citation index that takes account of differing citation rates between disciplines, by comparing Maynooth publications to the world output in same areas and over the same time window. www.scival.com/overview/publications/summary?uri=Institution/3190040

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indirect costs plus €2.3M in 3rd party transfers for collaborating partners. This included €8.4M from European Union sources.

Research at the highest levels is a truly global enterprise and addressing global and societal issues requires that universities are strongly collaborative, with a focus on important questions. 51% of Maynooth publications are authored in collaboration with institutions in other countries, with a high field weighted citation index of 2.23. The University also has a strategic goal to increase collaboration with industry, and currently 5.7% of our publications include a co-author from industry. These publications have a field weighted citation index of 4.36, indicating that they have significant impact.

Figure 1 below presents the profile of MU publications, grouped according to the categories of journal in which the publications appear². This gives a useful overview of the publication profile of the university, both in volume and the extent to which they are important within their international community. The latter is indicated by the FWCI of the various categories, all of which are close to or above world average of 1.00. Within this catalogued publication output, a number of sub-areas stand out as representing very high quality. They include terahertz space optics; geography and planning; sociology and political science; economics and econometrics; biological and biomedical sciences; business, management and innovation.

MU SCOPUS PUBLICATIONS 2014–18

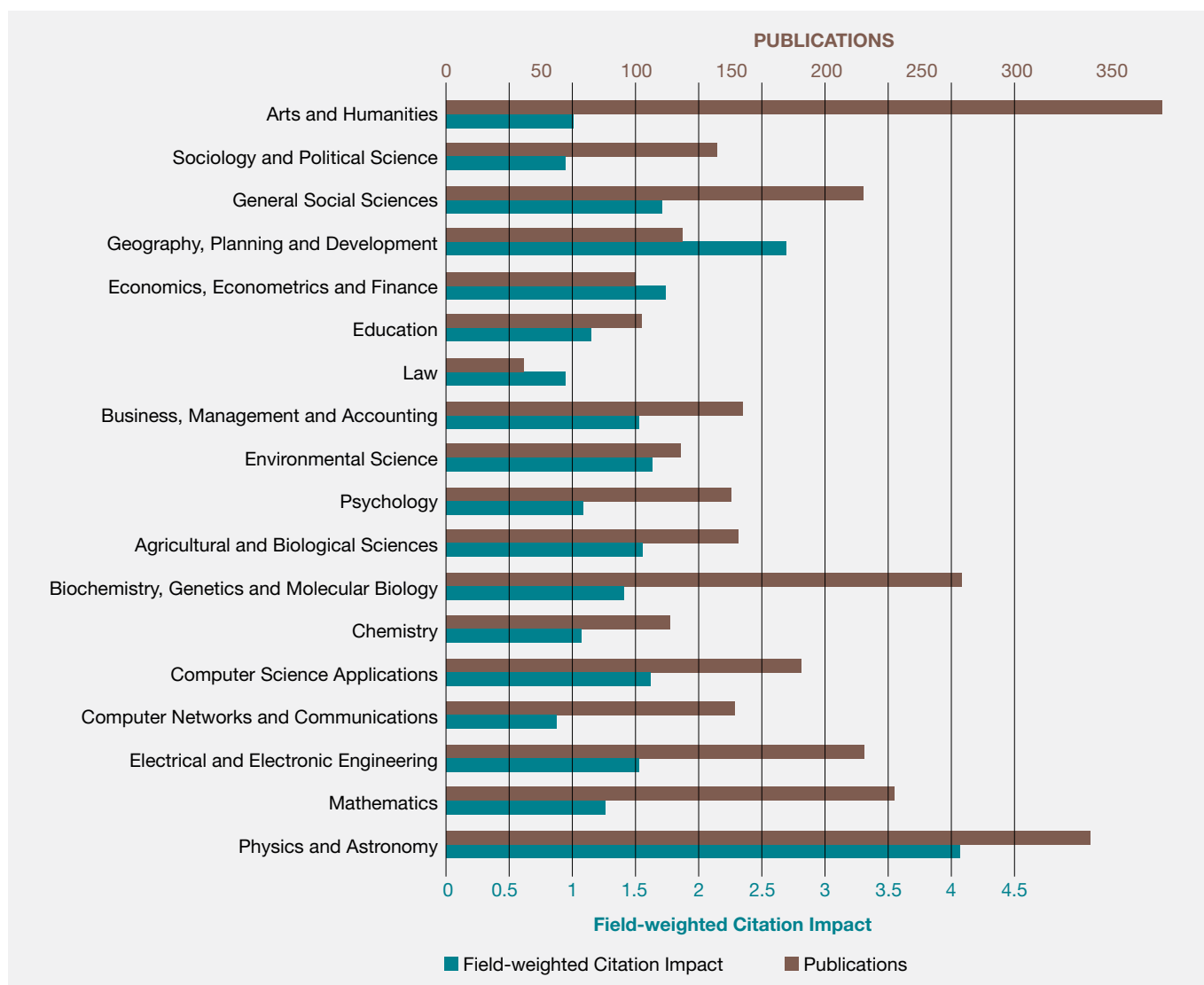


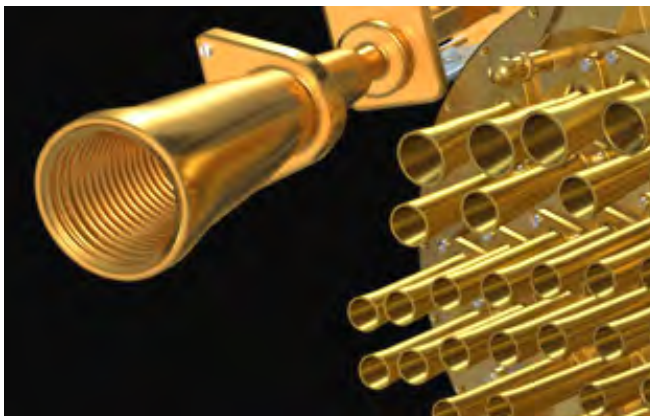
Figure 1 MU Scopus publications 2014-18

² Note that these do not map to academic departments and institutes of the university; for example, *Computer Science Applications*, includes contributions from numerous departments, not only Computer Science. Also, a particular publication may be associated with more than one category.

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Significant niche clusters of research topics are present in a range of areas of expertise including astrophysics; wave energy engineering; technology and industry; climate modelling; anti-bacterial agents; cognitive radio systems; Ireland and Britain; statistics; cultural studies; morals and behavior; and computer vision. Most of these areas align strongly to the established research institutes and centres of the University.

The outstanding contribution to the University's citation record 2014-2018 came from the Terahertz Space Optics Group (Department of Experimental Physics) led by Professor Anthony Murphy, most notably for its contribution to the European Space Agency Planck satellite mission for which Professor Murphy was a Co-Investigator.



The Department of Experimental Physics, led by Professor Anthony Murphy, contributed to the European Space Agency Planck satellite mission

The Planck mission was carried out by an international team of several hundred scientists and engineers and provided the most detailed map to date of the cosmic microwave background. It operated from 2009-2013, and its launch was preceded by more than a decade of detailed design and planning. It was primarily in instrument design that the Maynooth contribution was made. Planck measured, with unprecedented precision the matter content and geometry of the universe; the imprint on the CMB of hot gas in galaxy clusters and of gravitational lensing by large-scale structure; constrained a hypothetical 'inflationary' phase; pinned down when the first stars formed, and provided unique information about interstellar dust and magnetic fields in our Galaxy. This is international scientific achievement of the very highest level.

Since 2014, the four academic members of the Terahertz Space Optics Group (Anthony Murphy, Marcin Gradziel, Creidhe O'Sullivan and Neil Trappe) have 171 publications recorded in Scopus (including 118 refereed journal articles, 49 conference papers, 1 book chapter), with 35% of these (60 publications) in the top 10% of cited articles worldwide. 21 of these (12%) are in the top 1% of cited articles worldwide. 95 of the publications were authored by the Planck consortium (350 international scientists) with Anthony

Murphy as co-author, and six of these papers have accrued a total of 9000 citations between them. The field weighted citation index for the group's output over the period is 7.18.

Five papers published in 2018 by Maynooth authors feature in the Web of Science Essential Science Indicators for "Hot" and Highly Cited papers.



Maynooth University authors featured in the Web of Science Essential Science Indicators for "Hot" and Highly Cited papers

Professor Rob Kitchin of the Department of Geography and Maynooth University Social Sciences Institute published in February 2018 "Digital turn, digital geographies?" in *Progress in Human Geography*, with international co-authors James Ash (Newcastle, UK) and Agnieszka Leszczynski (Auckland, NZ). This paper was cited 84 times up to April 2020, and by December 2019 was in the top 0.1% most highly cited papers in the last two years in the field of Social Sciences.

A climate change paper in the top 1% for citations in Geosciences was co-authored by Dr Gerard McCarthy of the Department of Geography and ICARUS Climate Research Centre. The paper "The North Atlantic Ocean Is in a State of Reduced Overturning" was published in *Geophysical Research Letters*, by D. Smeed et al, in February 2018. It has received 54 citations up to December 2019.

A third geography publication in the top 1% for citations in Social Sciences was co-authored by Dr Ronan Foley. The paper "From therapeutic landscapes to healthy spaces, places and practices: A scoping review" was published in *Social Science and Medicine*, by S.L. Bell et al, in January 2018. It has received 41 citations up to December 2019.

Two Web of Science highly cited papers came from the Department of Biology and the Lonsdale Institute. Dr Emmanuelle Graciet was corresponding author of "Life and death of proteins after protease cleavage: protein degradation by the N-end rule pathway" which was published with co-authors N. Dissmeyer (Halle, Germany) and S. Rivas (Toulouse, France) in *New Phytologist* in May 2018.

RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY

This paper, dealing with protein stability, was cited 28 times up to December 2019, which placed it in the top 1% most highly cited papers in 2018 in the field of Plant and Animal Science.

Lastly, Dr Fiona Walsh of the Department of Biology and the Lonsdale Institute was a co-author of a review “Antibiotic-Resistance Genes in Waste Water” by A. Karkmann et al, published in Trends in Microbiology in March 2018. This paper was cited 89 times up to December 2019, and was in the top 1% most highly cited papers in 2018 in the field of microbiology.

While publication in leading international journals or through international publishers is the normal expectation for all academic staff, the dissemination of research outputs and transfer of knowledge to the wider world via open access and participation in international conferences is also a central part of the university’s research culture.

There is a strong commitment to other forms of knowledge transfer to communities beyond the University. Many staff from the humanities and social sciences contribute in a variety of ways to the arts, culture, social and economic development, and environmental policies. Specific examples include invited participation in national and international policy advisory bodies; preparation of strategies to support local authorities, local communities, and private enterprises; provision of workshops targeted at audiences of practitioners in many fields; and organising cultural events at local and national levels. These activities represent the very strong public service and civic engagement commitment of the University, and many are detailed in the section on each Faculty below.

Engaged research, a well-defined category of civic engagement, is an important and distinctive feature of Maynooth University. Engaged research describes a wide range of rigorous research approaches and methodologies that share a common interest in collaborative engagement with the community. It aims to improve,

understand, or investigate an issue of public interest or concern, including societal challenges. Engaged research is advanced with community partners rather than for them. ‘Community’ refers to a range of public research stakeholders, including public or professional service and product users, policy makers, civil and civic society organisations (CSOs) and actors³. Maynooth is an active participant in the Campus Engage national network⁴. The report includes details of 60 projects that may be classified as engaged research.



The University is a significant participant in nine of the national Science Foundation Ireland (SFI) Research Centres, and this participation has been extended in 2018/19. Of particular note, the University strengthened its involvement in ADAPT, through Dr Aphra Kerr of Sociology and MUSSI, and Professor Markus Helfert of the School of Business and IVI, both of whom are Adapt investigators. A new €4.2M initiative on autonomous vehicles between the Lero, Insight and Connect Centres involves Dr John McDonald (Computer Science and Hamilton Institute) and Dr Tim McCarthy (Computer Science and National Centre for Geocomputation) as investigators.

³ Engaged Research: Society and Higher Education Working Together to Address Societal Challenges, Campus Engage, 2017

⁴ www.campusengage.ie

RESEARCH AND INNOVATION AT MAYNOOTH UNIVERSITY

TECHNOLOGY TRANSFER, ENTERPRISE PARTNERSHIPS AND COMMERCIALISATION

In 2019 Avectas, spun out of Maynooth University in 2011, raised its single largest investment of \$10 million. This brings the total raised so far for its ground-breaking cell therapy technology to over \$20 million. This latest round was led by leading pharmaceuticals investor Seamus Mulligan and is expected to fund the company to the point where its technology will be positioned for clinical trials. Avectas expected to add to its 24 staff following the new investment. Avectas is working on cell engineering technology that allows cells to be taken from people, who are often critically ill, and returned to them after they have been genetically engineered to address their illness.

Avectas supplies the delivery technology and the advanced therapeutic molecules will come from the various drug companies with which they are working. In this way, Avectas' is one of the leading cell engineering companies in personalised medicine. Avectas' Solupore® technology increases cell permeability in a way that is gentler on the cells and more cost efficient than rival approaches. It also means the engineered cells can be returned to the host patient more quickly.



Spin-out company Avectas has raised \$20 million for its ground-breaking cell therapy technology

Maynooth University and Intel Ireland signed a Memorandum of Understanding (MoU) to establish a strategic partnership for research and innovation, and to nurture future talent. Building on already strong relationships between Intel and Maynooth, the MoU will establish a more comprehensive and structured format for creative collaborations in key areas of research.

The agreement signed by Maynooth University President, Professor Philip Nolan, and Eamonn Sinnott, General Manager of Intel Ireland and Vice President Technology Manufacturing Group, marked a new chapter in the relationship between Ireland's fastest growing university and the global leader in manufacturing and technology.

As a commitment to developing the relationship between two major employers and contributors to enterprise, research and education policy, the MoU offers the potential for Intel and Maynooth to enhance their strategic presence in the fastest growing demographic region of Ireland by working in a more comprehensive and structured format.

The two organisations will co-operate to identify, optimise and nurture research and innovation in areas of growth potential, such as Maynooth's U-Flyte project on Unmanned Aircraft Systems (co-funded by SFI and industry partners), artificial intelligence, design and innovation.

The partnership will also seek to explore ways to work together on topics such as emerging skills and talent needs, and extending diversity in education, including the representation of women in STEM- related education programmes and STEM careers.

Maynooth University continues to be an important collaborator in the SFI Research Centres. These collaborations are an important way for the university to build strong collaborative relationships with industry. Companies who started new centre projects this year include Nokia, Dense Air and ESBI.

Our collaborations with industry were further enhanced with the creation of the Centre for Research Training in Foundations of Data Science in collaboration with UCD and UL and funded by SFI. This centre is focused on training a cohort of PhD students with a world-class foundational understanding of the horizontal themes of Applied Mathematics, Statistics and Machine Learning. 30 Industry partners, 10 of which will work directly with Maynooth University will collaborate and cooperate in this training by hosting students on short term placements.



Pictured at the launch of the SFI Centre for Research Training in Foundations of Data Science, Professor Brendan Murphy, Dr Sinead O'Doherty, Dr Caroline Brophy, Dr Norma Bargary, Professor Ken Duffy, Professor Mark Ferguson, Professor James Gleeson, Gerry Doyle, ICT Skillnet Ireland, Associate Professor Claire Gormley, Dr Sinead Burke, Professor Nial Friel

AWARDS AND PRIZES

A NUMBER OF MAYNOOTH UNIVERSITY RESEARCHERS WERE RECOGNISED FOR THEIR CONTRIBUTION BY EXTERNAL AWARDS IN 2018/19, AND WE ARE PROUD TO ACKNOWLEDGE THESE, WHICH REFLECT THE EXCELLENCE OF THE UNIVERSITY ACROSS THE FULL SPAN OF ITS FACULTIES.



AWARDS AND PRIZES IN 2018/2019

APPOINTMENT TO THE COUNCIL OF STATE

DR MARY MURPHY



Dr Mary Murphy, Department of Sociology

Dr Mary Murphy was appointed by President Michael D Higgins to the Council of State. She was presented with a warrant of appointment as an incoming Member of the Council of State by President Michael D Higgins at an official event in Áras an Uachtaráin.

Dr Murphy, a senior lecturer in Irish Politics and Society in the Maynooth University Department of Sociology, was among the seven new appointees to the consultation body of the President, which was established under the Constitution.

THE INTERNATIONAL ASSOCIATION FOR THE PHYSICAL SCIENCES OF THE OCEANS EARLY CAREER SCIENTIST MEDAL

DR GERARD MCCARTHY



Dr Gerard McCarthy, Department of Geography, and Professor Philip Nolan, President of Maynooth University

Dr Gerard McCarthy of the ICARUS Climate Research Centre and Department of Geography was awarded the prestigious Early Career Scientist medal by the International Association for the Physical Science of the Oceans. The IAPSO Early Career Scientist Medal honours Early Career Scientists for their outstanding research in the physical or chemical sciences of the oceans, and for their cooperation in international research.

In December 2018, funding of €2 million for a major project led by Dr McCarthy on Atlantic climate change was announced by the Marine Institute and the European Regional Development Fund. The Atlantic climate change project funded by the Marine Institute and the European Regional Development Fund will bring the field of 'decadal climate prediction' to Ireland. This emerging field will lead to improved estimates of the future climate over the period of a decade by using the predictability of the ocean.

The International Association for the Physical Sciences of the Oceans (IAPSO) is one of eight associations of the International Association of Geodesy and Geophysics, which is part of the International Council for Science.

AWARDS AND PRIZES IN 2018/2019

IRISH RESEARCH COUNCIL EARLY CAREER RESEARCHER OF THE YEAR AWARD

DR KAREN ENGLISH



Dr Karen English, Department of Biology

Dr Karen English won the Early-Career Researcher of the Year Award of the Irish Research Council (IRC). Dr English was presented with the IRC Award in recognition of her research on developing 'calming' cells in therapies for inflammatory conditions such as asthma, and for immune system disorders, such as organ transplant rejection.

Dr Karen English is an alumna of Maynooth having graduated three times from this university with BSc, MSc and then PhD in 2008. She subsequently was awarded a Marie Curie Fellowship to carry out her postdoctoral training at the University of Oxford (2009-2011) before returning to Maynooth University, first as a Health Research Board Translational Medicine Research Fellow and later as a Science Foundation Ireland Starting Investigator. She was appointed as a Lecturer in the Biology Department in 2015, and in 2018 is one of just 36 academics in Ireland, across all fields of research, to be awarded an Irish Research Council Laureate Award to progress her work.

Dr English is a Principal Investigator at Maynooth University's Department of Biology and head of the Cellular Immunology Lab.

MATHS WEEK IRELAND AWARD

PROFESSOR ANTHONY O'FARRELL AND DR FIACRE Ó CAIRBRE



Dr Fiacre Ó Cairbre, Department of Mathematics, and Professor Anthony O'Farrell, Professor Emeritus

Professor Anthony O'Farrell and Dr Fiacre Ó Cairbre, were honoured with the Maths Week Ireland Award for their contribution to raising public awareness of maths. The annual award is presented during Maths Week Ireland, the world's largest festival of maths and numeracy.

Professor O'Farrell founded the annual Hamilton walk in 1990 and Dr Ó Cairbre has now run it for many years. The walk celebrates the day, October 16, and the route taken by William Rowan Hamilton one of the world's most outstanding mathematicians, who discovered quaternions in a stroke of inspiration while walking along the banks of the Royal Canal in Dublin. His discovery changed the future of mathematics. Hamilton scratched his formulas for the quaternions into the wall at Broome Bridge, Cabra.

Maths Week Ireland is funded through the Science Foundation Ireland Discover Programme, the Department of Education and Skills, Matrix (the Northern Ireland Science Industry Panel), ESB and Xilinx, and co-ordinated by Calmast, Waterford Institute of Technology's Stem Outreach Centre.

AWARDS AND PRIZES IN 2018/2019

AMERICAN ANTHROPOLOGICAL ASSOCIATION PRESIDENTIAL AWARD

DR CHANDANA MATHUR



Dr Chandana Mathur, Department of Anthropology

At the November 2018 American Anthropological Association Annual Meeting at San Jose, Dr Chandana Mathur received the prominent AAA Presidential Award for her leadership in uniting global anthropology under the World Anthropological Union (combining the World Council of Anthropological Associations and the International Union of Anthropological and Ethnological Sciences).

ANTHROPOLOGICAL ASSOCIATION OF IRELAND AWARD

DR ABDULLAHI EL-TOM



Dr Abdullahi El-Tom, Department of Anthropology

Dr Abdullahi El-Tom was awarded the 2019 AAI Award in acknowledgement of his contribution to the building of the Anthropological Association of Ireland (AAI).

AWARDS AND PRIZES IN 2018/2019

PROFESSOR PAUL MOYNAGH MEMBER OF THE ROYAL IRISH ACADEMY

PROFESSOR MOYNAGH



Professor Peter Kennedy, President of the Royal Irish Academy and Professor Paul Moynagh, Department of Biology and Kathleen Lonsdale Research Institute for Human Health

Professor Moynagh, who is Head of the Department of Biology and Director of the Kathleen Lonsdale Institute for Human Health Research, became one of 27 new members of the RIA, and one of 10 new members admitted from the Sciences in 2019.

Professor Moynagh has published extensively in the area of immunology-related research. In 2009 he was awarded the NUI Centennial Prize for Academic Publishing in Medical and Health Sciences and he is the recipient of the 2014 Irish Area Section Biochemical Society (IASBS) Medal. He is a Science Foundation Ireland (SFI) Principal Investigator. His research focuses on delineating the roles of Pellino proteins in immunity.

The Academy has been honouring Ireland's leading contributors to the world of learning since its establishment in 1785.

DEPARTMENT OF BIOLOGY AWARDED THE ATHENA SWAN BRONZE AWARD

DEPARTMENT OF BIOLOGY



Claire McGing, Athena SWAN Project Officer, Maynooth University, Professor Paul Moynagh, Department of Biology and Dr Karen English, Chair of the Biology self-assessment team

The Department of Biology has achieved an Athena SWAN Bronze Award, which recognises work undertaken to advance gender equality for staff and students at departmental level.

Biology is the first department at Maynooth University to apply for, and achieve, Athena SWAN accreditation, which is overseen by Advance HE.

The 39 items in the Biology action plan include:

- Establishing a voluntary mentoring programme for all academic and research staff, with a specific focus on women's careers.
- Embedding gender equality issues into the Department's Quality Assurance and Quality Enhancement processes.
- Hosting an annual Phyllis Clinch Lecture to further enhance the visibility of women role models in the global discipline of Biology.
- Amending the annual PhD progress review to include sections on work-life balance and career development.
- The Department of Biology also will seek to align departmental, institutional and sectoral work on the advancement of gender equality in STEM.

The Biology self-assessment team (SAT) includes representation from academic, research, administrative and technical staff, and postgraduate and undergraduate students.

AWARDS AND PRIZES

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARDS

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARD 2019

TERAHERTZ SPACE OPTICS GROUP: PROFESSOR ANTHONY MURPHY, DR CREIDHE O'SULLIVAN, DR NEIL TRAPPE AND DR MARCIN GRADZIEL



Dr Neil Trappe, Dr Croidhe O'Sullivan, Professor Philip Nolan, Dr Neil Trappe and Dr Marcin Gradziel and Professor Anthony Murphy, Department of Experimental Physics

The 2019 winner of the MU Research Achievement Award was awarded to the Terahertz Space Optics Group: Professor Anthony Murphy, Dr Croidhe O'Sullivan, Dr Neil Trappe, and Dr Marcin Gradziel.

The Space Terahertz Optics group in the Experimental Physics Department has internationally recognised expertise in millimetre-wave optics, electromagnetics, instrument qualification and astronomical observation. They are core team members of a number of world leading astronomical projects including ALMA, the ESA Planck Surveyor and Herschel Space Observatory. The research group formed by Professor Anthony Murphy currently includes 4 academic staff and 6 research students working in optical design, analysis and measurements for current international projects such as QUBIC (a Q&U Bolometric Interferometer for Cosmology) and a spectrometer instrument called SAFARI for a future satellite mission SPICA (Space Infrared telescope for Cosmology and Astrophysics) for the ESA Cosmic Vision 2015-2025 programme. As well as astronomical imaging, the group are also investigating terrestrial applications of terahertz technology through their terahertz Vector Network Analyser test facility. Each group member has been PI on individual research grants as well as collaborators on joint awards.

Over the last twenty years the space optics group has made a number of major contributions to the development novel astronomical instrumentation for the far-infrared and sub-millimetre wavelengths that have enabled detailed cosmological measurements and observations that were impossible only a few short years ago. Because of their particular expertise in long wavelength optical modelling the members has been key participants of the instrument development teams for a number of ground based and space based projects. This includes the European Space Agency Planck satellite (operational 2009-13) and the Herschel Space Observatory (2009-), for both of which projects Murphy was a Co-Investigator.

In 2018 the Planck Satellite Team was awarded the prestigious Gruber Cosmology Prize at the XXX General Assembly of the International Astronomical Union. The Gruber Cosmology Prize is awarded annually to honour a leading cosmologist, astronomer, astrophysicist or scientific philosopher for theoretical, analytical, conceptual or observational discoveries leading to fundamental advances in our understanding of the universe. Professor Murphy was a named co-investigator along with 350 other international scientists on the team awarded the prize, and specifically was a co-investigator for development of the high frequency instrument (HFI) on board the satellite.

AWARDS AND PRIZES

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARDS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY RESEARCH ACHIEVEMENT AWARD

PROFESSOR PATRICIA PALMER



Professor Patricia Palmer, Department of English

The 2019 award went to Professor Patricia Palmer of the Department of English. She graduated with an MA from University College Cork after which she worked in Athens and Brussels before taking a D.Phil. in English literature at the University of Oxford. She was Senior Lecturer in the University of York (2000-2008) and Reader in King's College London (2008-2016) and took up the chair of Renaissance Literature in Maynooth in 2017.

Professor Palmer is a leading researcher in the fields of early modern literature and culture and in Irish Studies. Her work on language and imperialism is pioneering in finding ways to give voice to the historically voiceless and to expand the parameters of how Ireland has been understood, historically and culturally. In this context, her insights into the relationship between violence and the aesthetic have been particularly keen and challenging. Her work is the first large-scale attempt to unify the field of early modern Irish studies by bringing together the materials, across disciplinary and linguistic boundaries, for an integrated overview of the period.

Her latest research, on cultures in conflict in Renaissance Ireland, the subject of her book *'Darkness Echoing: Cultural Encounters in Renaissance Ireland'* (in preparation), forms the basis for her Advanced Laureate Award funded by the Irish Research Council in 2019, which aims to map the full range of cultural activity across languages and ethnic groups in Ireland from the mid sixteenth to the late seventeenth century. She is also Principal Investigator on the MACMORRIS Project, a four-year DH project which seeks to map the full range of cultural activity, across languages and ethnic groups, in early modern Ireland.

AWARDS AND PRIZES

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARDS

EARLY CAREER RESEARCHER OF THE YEAR

DR GERARD MCCARTHY



Dr Gerard McCarthy, Department of Geography and ICARUS Climate Research Centre, and Professor Philip Nolan, President of Maynooth University

Dr Gerard McCarthy, Department of Geography and ICARUS Climate Research Centre was the winner of the overall early career award in 2019.

Gerard is an oceanographer working in ICARUS and lecturer in the Department of Geography at Maynooth University. Gerard previously worked at the National Oceanography Centre in Southampton, UK, where he worked with the RAPID team measuring the Atlantic Meridional Overturning Circulation.

His research interests are in the role of the ocean in climate and how that might change with climate change. Gerard was recently awarded €2 million in funding from the Marine Institute and the European Regional Development Fund for a major project on Atlantic climate change. Guided by the goals of the Government's national marine strategy 'Harnessing Our Ocean Wealth' and the 'National Marine Research and Innovation Strategy 2017 – 2021', the international 'A4 Project' marks a substantial investment by the Marine Institute in physical oceanography and climate change research in Ireland, and aims to improve the understanding of the links between trends in Atlantic temperatures and climate change. In addition, he also been involved with European Commission funded projects: THOR (FP7, named researcher), NACLIM (FP7, Institute PI), and the ongoing Blue-Action (Horizon 2020, Institute PI and Work package Leader).

Since finishing his PhD in 2011, Gerard has published over 30 papers in peer-reviewed journals. He has an h-index of 18, an i-10 index of 21, and a Research Gate score of 29.85. His work has been cited over 1400 times, with annual citation numbers increasing year-on-year to over 390 citations in 2018 (Google Scholar). He has consistently published in high impact journals, including a lead author publication in *Nature* (IF=41.6) in 2015. He is a senior author on 4 out of his 5 most highly cited papers (3 lead author, 1 second author), all of which are ranked in the top 1% most highly cited in the field of Geosciences based on age (Web of Science). Since joining Maynooth University in late 2017, he had 9 peer-reviewed publications in 2018, including a lead author publication in *Geophysical Research Letters* (IF=4.3) and second author publication in the *Bulletin of American Meteorological Society* (IF=7.9). He was also invited to contribute a News and Views article to *Nature*, published in summer 2018.

AWARDS AND PRIZES

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARDS

FACULTY OF SCIENCE AND ENGINEERING – DR OZGUR BAYRAM

DR OZGUR BAYRAM



Dr Ozgur Bayram, Department of Biology and Kathleen Lonsdale Institute for Human Health Research and Professor Philip Nolan, President of Maynooth University

Dr Ozgur Bayram, of the Department of Biology and Kathleen Lonsdale Institute for Human Health Research won the early career research achievement award in the Faculty of Science and Engineering. He received an MSc in Molecular Biology in Uludag University in Turkey and his PhD in Microbiology from the Institute of Microbiology and Genetics in Georg-August University in Germany before joining the Department of Biology in Maynooth in 2014.

His research interests are in fungal secondary metabolites including food contaminating mycotoxins. He takes an innovative approach to examine food contamination due to global warming, which combines molecular biology and quantitative proteomics, and has significant potential to combat fungal pathogenesis as a result of fungal disease, and food contamination. A key impact of his research will be on human and animal health as his discoveries are leading to new strategies to combat opportunistic human and animal fungal pathogens. Secondly, the impact of climate change on food safety and security consequent of altered patterns of mycotoxin production by fungi will be enhanced by his efforts and expertise. Since contamination of human and animal nutrients with

fungal mycotoxins is a major issue for food safety and security, prevention of such contamination will allow us to feed the increased human population in a safe manner to global warming, average global temperatures will increase in the next 30-50 years, which will lead to an increase in fungal growth and therefore mycotoxin production in human and animal feed.

He holds a Career Development Award from Science Foundation Ireland and has published more than 40 peer-reviewed research papers with more than 2000 citations and an h-index of 20. He recently published in *Developmental Cell*, *Plos Pathogens*, *MBIO* and *Genome Biology*.

AWARDS AND PRIZES

MAYNOOTH UNIVERSITY RESEARCH ACHIEVEMENT AWARDS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY

DR JOHN PAUL NEWMAN



Dr John Paul Newman, Department of History, and the Centre for European and Eurasian Studies

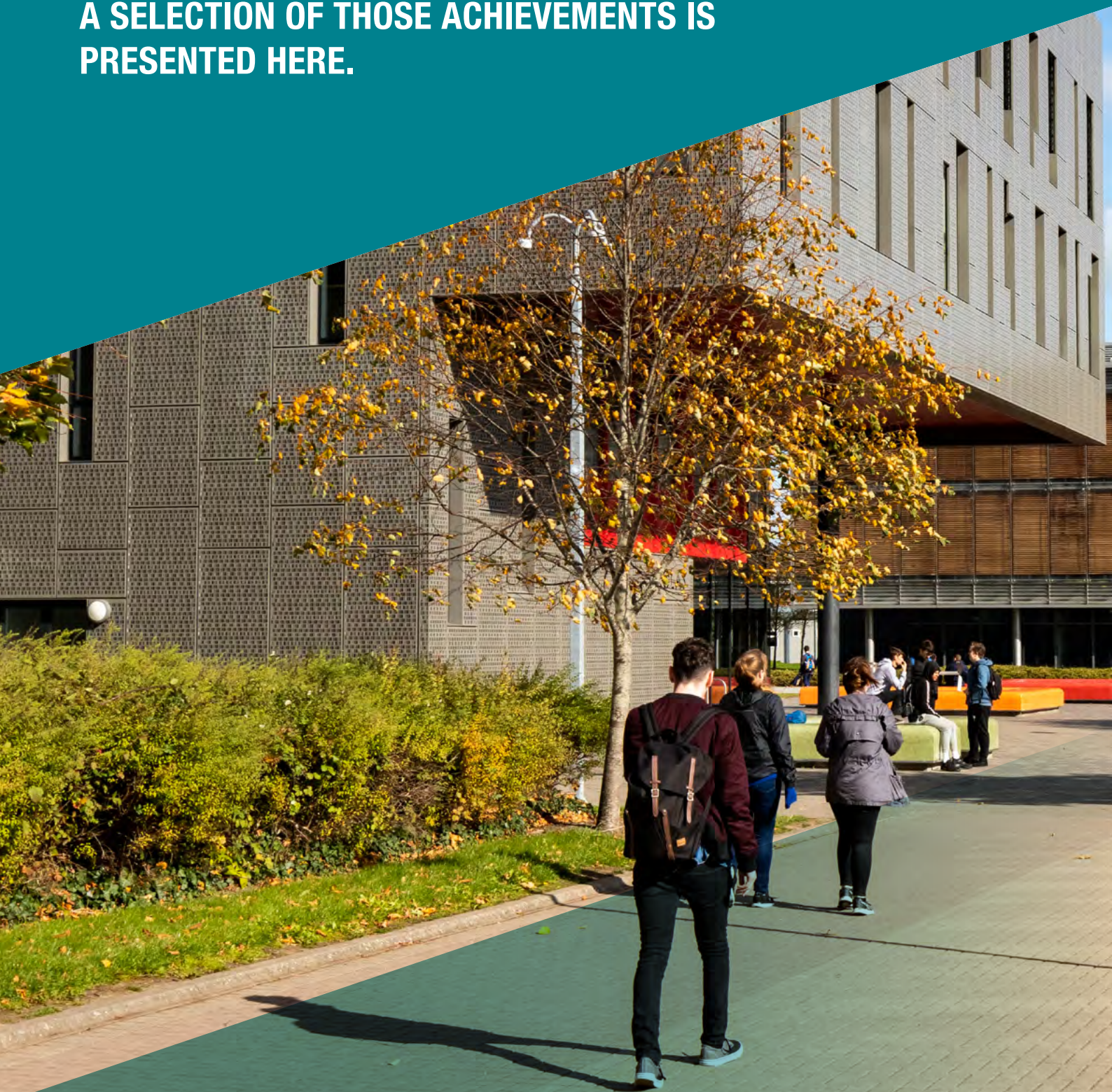
Dr John Paul Newman, Department of History, and the Centre for European and Eurasian Studies won the early career research achievement award in the Faculty of Arts, Celtic Studies and Philosophy. Dr John Paul Newman is Senior Lecturer in Twentieth-century European History. He completed his PhD at the University of Southampton (supervised by Professor Mark Cornwall) and from 2008- 2011 he was an ERC Postdoctoral Research Fellow working on the project 'Paramilitary Violence after the Great War', to which he contributed a case study of violence in the Balkans.

He is interested in the modern history of the Balkans and East-Central Europe, with a particular focus on Yugoslavia, Bulgaria, Macedonia, and Czechoslovakia. His work to date has focused on war veterans, paramilitary violence, and on the larger legacies left by war in the region. He has been working on a large research project looking at victorious societies and cultures of war victory in twentieth century Europe, a study of the Croatian General Josip Jelačić and the intersections of national and imperial identities in nineteenth-century Central Europe, and a book-length study of irregular warfare and paramilitary violence in the Balkans, provisionally titled 'Freedom or Death: A History of Guerilla Warfare in the Balkans.

His most significant achievement recently has been the publication of several books addressing the First World War and its consequences in Central-Eastern Europe and the Balkans. He has published on veterans of the First World War, paramilitary violence, and the larger legacies left by war in the region. His monograph, *'Yugoslavia in the Shadow of War: Veterans and the Limits of State-Building, 1903-1945'* was the first of its kind to address long-term problems created by War and its aftermath in the Balkans. The book was published with Cambridge University Press. He has also contributed to and edited 3 volumes on various aspects of war and its aftermath and two journal special editions on related topics.

FACULTY HIGHLIGHTS

2018/19 SAW NUMEROUS ACHIEVEMENTS IN RESEARCH, SCHOLARSHIP, INNOVATION AND ENGAGEMENT ACROSS ALL THREE FACULTIES. A SELECTION OF THOSE ACHIEVEMENTS IS PRESENTED HERE.



FACULTY HIGHLIGHTS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY

DEPARTMENT OF ANCIENT CLASSICS

In academic year 2018-2019 members of the Department of Ancient Classics continued to make significant contributions to research and scholarship in a variety of forms and across a wide field. As well as presenting frontline new research in the form of books, book chapters, and refereed research articles, the 2018 publications list includes contributions to works of reference, 'popular' publications prepared by subject experts for a 'middlebrow' readership and thus addressing an outreach/impact agenda, and book reviews in learned journals. Conference and seminar papers also form part of the 2018-2019 output. The intellectual spread of the work is broad, with emphases in areas as diverse as Greek philosophy, Latin literature, the history of late Antiquity, and classical reception studies; as in its teaching, so in its research the Department's scope is extensive, especially when considered in relation to its size.



Texts and Violence in the Roman World

Publication highlights from 2018 include *Texts and Violence in the Roman World*, a Cambridge University Press volume co-edited by Professor David Scourfield and Professor Monica Gale of Trinity College Dublin. A collection of eleven papers by a distinguished team of mostly senior scholars from the UK, the USA, and Ireland, and featuring a very substantial introductory chapter by the editors, the book breaks new ground in examining the representation of violence in different contexts across a wide sweep of authors and genres, from the Roman comedy of Plautus in the late third/early second century BC to the martyrological poems in lyric metres by the Christian Prudentius in the early fifth century AD. Special attention is paid to the topical subjects of the relationship between artistic representations of violence and violence in the real world and between violence and violent rhetoric, with parallels drawn with contemporary culture and much reference made to film and film theory. Reviews in the two principal Classics review journals in English are overwhelmingly positive: K. Gervais (*Classical Review* 69.2 [2019], 441-4) comments, for example, that 'a volume like this is long overdue - The volume offers fine generic, temporal and methodological variety, while remaining admirably integrated in

its approach; indeed, the introduction and cross-references bind the volume together unusually well' (441-2), and describes the content as 'excellent' no fewer than five times; M. Myers (*Bryn Mawr Classical Review* 2019.14.05), similarly, characterizes it as 'an excellent book full of exciting contributions to the study of Roman literary violence [which] will prove invaluable to scholars working on any aspect of violence in the ancient world - The chapters are constantly thought-provoking'.

Positive reviews were received in 2018 also of Michael Williams's monograph, *The Politics of Heresy in Ambrose of Milan: Community and Consensus in Late Antique Christianity* (Cambridge University Press, 2017). B. Dunkle (*Church History* 87 [2018], 832-4) declares that 'Williams's Politics of Heresy is an impressive achievement - All future Ambrosian scholars and students of late antiquity will benefit from his careful, if reasonably speculative, account of the central "doctrinal" achievements of the Bishop of Milan' (834). M. Chalmers, in *Ancient Jew Review* for 2018 (online publication), concludes his review of the book by saying: 'Williams' book confidently represents, therefore, more than a successful alternative reconstruction of Milanese matters in the time of Ambrose. It also embodies the potential of a rhetorically-focused approach for generating research questions and reflexive critiques of our readings of late antique Christian texts'.

More generally, members of the Department published in front-rank international journals such as *Classical Receptions Journal* (Oxford) and *Historia: Zeitschrift für alte Geschichte* (Stuttgart), and in edited volumes published by major academic presses such as Brill (Leiden) and Routledge (London).

The highlight of the Maynooth Classics Seminar in 2018-2019 was a special event jointly hosted by the Departments of Ancient Classics and Music and supported by the MU Arts and Humanities Institute, at which Professor Armand D'Angour (Oxford), a world-leading authority on ancient Greek music and its performance, spoke on 'The Rediscovery of Ancient Greek Music'. In all, the Seminar met eight times during the year, to hear and discuss papers on topics ranging widely across Greek and Roman culture and the reception of classical Antiquity.

Besides presenting conference and seminar papers, members of staff were also involved in conference planning and preparation. Dr Jonathan Davies established the basis and framework for a conference on the Flavian Empire to be held at MU in June 2020 (a grant from the MU Conference and Workshop fund has since been awarded), while Professor David Scourfield continued to play a leading role, as Chair of the Steering Committee, in the planning of a major international conference on the (classically educated) author E. M. Forster, to be held in Cambridge (King's College and the Faculty of English) in April 2020. Professor Scourfield obtained a grant for this conference from the Modern Humanities Research Association (MHRA) in its competitive annual scheme; successful

FACULTY HIGHLIGHTS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY

bids for funding (from Cambridge and from the University of Manchester) were also made through other members of the Steering Committee.

CLASSICS NOW 2020 (COMMUNITY PARTNERSHIP PROJECT)

This is a major outreach/impact project in which the Department is collaborating with colleagues from TCD, UCD, and the Classical Association of Ireland–Teachers (CAIT), and with a professional arts consultant/producer. It will be realized in a festival of Classics which will be held in Dublin in the autumn of 2020 and which, through a range of events, will invite audiences to discover and engage with classical Antiquity as interpreted by contemporary writers, artists, and thinkers from Ireland and abroad. It is research-driven. A series of planning meetings took place during 2018–2019, and continues.

SCHOOL OF CELTIC STUDIES

The School of Celtic Studies encompasses Nua Ghaeilge (Modern Irish), Early Irish and Lárionad na Gaeilge (Centre for Irish Language Research, Teaching and Testing).

EARLY IRISH

In 2018–19, the Department of Early Irish continued to produce world-leading research in the language, literature, history and culture of pre-modern Ireland. The 5-year ChronHib project, funded by an ERC Consolidator Grant awarded to Professor David Stifter, continued its innovative study of the chronology of the Irish language, while the 2-year MIMNEC project, funded by an IRC Laureate Award for Dr Deborah Hayden, began its first year of research into the medical manuscripts of medieval Ireland. The number of PhD students and postdoctoral scholars in the Department continued to grow, and the Department consolidated its international reputation as a leading centre for the study of Early Irish.

RESEARCH GRANTS

The IRC-funded MIMNEC project got underway in 2018–19, and the ERC-funded ChronHib project entered its fourth year. Members of staff associated with both projects received numerous other research awards: both Dr Fangzhe Qiu, a postdoc on the ChronHib project, received a Royal Irish Academy Charlemont Grant to fund a research visit to Uppsala University, as well as a NUI Early Career Grant to fund an international conference on the use of statistics in the study of historical corpus linguistics (which took place in October 2019). There was also internal funding success beyond these two flagship projects: the top-ranked applicant to the Faculty of Arts, Celtic Studies and Philosophy in 2018 for the John and Pat Hume Scholarships at Maynooth, Viktoriia Krivoshechkova, arrived from Russia to begin her research under the supervision of Dr Elizabeth Boyle in September 2018. The top-ranked applicant to

the Faculty in the 2019 competition was Chelsey Collins (Mississippi University for Women), who was also applying to work with Dr Boyle. She began her doctoral studies in September 2019. Two other PhD students also received Hume Fees Waivers in the 2018 and 2019 competitions respectively and are now undertaking doctoral research in the Department, under the supervision of Professor David Stifter and Dr Deborah Hayden.

PUBLICATIONS

Members of the Department of Early Irish continued to publish world-class research in a diverse range of publications, including international peer-reviewed journals, edited books, handbooks, textbooks and encyclopedias. Publications in the leading peer-reviewed journals in the field include articles by Professor David Stifter in *Ériu*, by Dr Deborah Hayden and by Dr Elliott Lash in *Keltische Forschungen*, by Dr Elliott Lash in *Transactions of the Philological Society*, and by Dr Bernhard Bauer in *Zeitschrift für celtische Philologie*. Both Dr Boyle and Dr Hayden contributed important chapters on aspects of the ‘Book of Ballymote’ to the latest volume in the Royal Irish Academy’s series on medieval Irish manuscripts (*Codices Hibernenses Eximii*) which arises out of an ongoing collaboration between the RIA and the Maynooth University Department of Early Irish. Furthermore, three members of the department (Professor Stifter, Dr Hayden, and Dr Qiu) published pieces in a Festschrift for Australian colleague Professor Neil McLeod, reflecting longstanding collaborations with colleagues in Sydney, and Professor Stifter published a collaboratively-written article with Dr Aaron Griffith (Utrecht) and Professor Gregory Toner (QUB) in *Kratylos*. In addition to work by academic staff, postgraduate students and recent PhD graduates published work in a range of outlets, from the Canadian philosophy journal *Dionysius* (Dr Daniel Watson) to the *Annual of Medieval Studies at the Central European University* (Viktoriiia Krivoshechkova), from the Dutch journal of Celtic Studies, *Kelten* (Lars Nooij) to the local *Laois Heritage Society Journal* (Ellen Ganly).



A Little Remnant of the Work of the Ancients Conference organised with the RIA

FACULTY HIGHLIGHTS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY

CONFERENCES AND INVITED LECTURES

The Department hosted, and collaboratively organised, several international conferences and workshops. Dr Boyle organised, in association with the RIA, the fourth Irish manuscripts conference, entitled “A Little Remnant of the Work of the Ancients”: 23 N 10 (The Book of Ballycummin) at the Royal Irish Academy in March 2019. Dr Hayden was chair of the organising committee of the Annual Colloquium of the Henry Sweet Society for the History of Linguistic Ideas, which was held in Maynooth in September 2018 – postdoctoral researchers from the Department were also on the organising committee of this conference, which drew 55 delegates from 15 different countries. Postdoctoral researchers of the ChronHib project, headed by Dr Lash, organised the 10th Celtic Linguistics Conference in Maynooth University in September 2018. In June 2019, Dr Hayden also co-organised a collaborative workshop, hosted at the University of Nottingham, on Medieval Manuscripts Meet Modern Science: A Workshop on Theory and Practice, which brought together laboratory scientists and medievalists to discuss innovative research practices in the study of medieval medicine.

In the 2018-19 academic year, Professor Stifter gave eight invited lectures in institutions such as Queen’s University Belfast and the Dublin Institute for Advanced Studies. In particular, we would note the outstanding honour of his being invited to give the prestigious O’Donnell Lecture 2019 at the University of Oxford. Dr Hayden gave ten academic papers in 2018-19, at institutions including Harvard, Nottingham, QUB and the RIA. Dr Boyle gave five invited lectures, including most notably at “Invasion 1169: the National Conference on the Occasion of the 850th Anniversary of the Anglo-Norman Invasion of Ireland”, which was held at Trinity College Dublin. Our postdoctoral researchers also gave numerous prestigious research talks: Dr Qiu, for example, gave invited lectures at both the Beijing Foreign Studies University and Peking University, China. Other postdocs delivered papers in Germany, Cyprus, Spain and the UK, while postgraduate students gave papers at Harvard, UCC and the University of Bangor. Closer to home, Dr Boyle gave a joint paper with then-MA (now PhD) student Chelsey Collins at the Inaugural Symposium of the MU SexGen Network of Research on Gender and Sexualities on the subject of “Judgements on Categories of Sons” and the “Regulation of Sexual Behaviour in Early Medieval Ireland”.

IMPACT AND EXTERNALLY-ENGAGED RESEARCH

The Department of Early Irish remains fiercely committed to public-facing dissemination of our research findings. In 2018-19 this resulted in a very wide range of high-profile public engagement activities both in Ireland and abroad. In one particularly notable instance, the work of the IRC-funded MIMNEC project was projected onto the side of a building in central Dublin, as part of a light display for Science Week 2018. The research of the Department of Early Irish also featured prominently in the media, with Dr Hayden, Dr Stifter and Dr Qiu all being invited onto the Pat Kenny Show (Newstalk) to

speaking about medieval Irish studies and the modern Irish language. Dr Hayden also appeared on The Chatroom with Angel Faull (CRCfm 102.9 Castlebar), was interviewed by Jim Carroll (RTÉ) at the BT Young Scientist and Technology Exhibition in the RDS, and recorded a podcast as part of the ‘Cool Science and Curious Minds’ series on East Coast FM. Professor Stifter featured in an episode of the RTÉ-produced series John Creedon’s Atlas of Ireland in August 2019. While co-organising a major conference on the ‘Book of Ballycummin’, Dr Boyle was the subject of an article in the Irish Independent in February 2019, under the headline “Stories and Laws from 1,000 Years Ago Unearthed in Ancient Book” and she was also interviewed on Kfm radio on the same subject. Both Dr Boyle and Dr Hayden published pieces for RTÉ Brainstorm: Dr Boyle had two articles published on the site (one about a conference trip to Svalbard, in the Arctic Circle, which took place during the polar night; the other about the use of “Celtic” imagery in modern folk horror TV and film), while Dr Hayden published a widely-read piece on medieval Irish medicine, which is now available as a podcast. Dr Qiu, was invited to give an overview of Irish language and culture to the new Chinese Ambassador to Ireland at the Chinese Embassy in Dublin.

OTHER RESEARCH CONTRIBUTIONS

Members of the Department of Early Irish continue to promote good academic citizenship within the discipline of Celtic Studies. This includes serving on editorial boards and the committees of learned societies, engaging extensively in peer reviewing and in organising training events and masterclasses for postgraduate students and postdocs. The Early Irish and Celtic Studies Research Seminar is well attended by scholars from Maynooth University as well as from other institutions in the greater Dublin area. Dr Boyle continued to serve on the editorial board of the Medieval Texts and Cultures of Northern Europe series (Brepols) and undertook extensive peer review for Amsterdam University Press (acting as reader for two monographs) and numerous academic journals. Dr Hayden continued her position on the editorial board of the *Journal of Celtic Linguistics* as well as joining the Research Committees of the MU Academic Council and MU Faculty of Arts, and served on the 2019 *ad hoc* committee of the International Congress of Celtic Studies in Bangor, Wales. In addition to his existing service positions, Professor Stifter joined the Scientific Council of *Études celtiques* in 2019 as well as the Board of Management of the Maynooth University Arts and Humanities Institute. Postgraduate student, Lars Nooij, became editor-in-chief of *Kelten*, the Celtic Studies quarterly published by the *Stichting A. G. van Hamel voor Keltische Studies*.

Through innovative, ethical and dynamic scholarship, demonstrated by extensive publication, research grants, conferences, workshops, public engagement and media work, Maynooth University Department of Early Irish continues to be the world’s leading centre for the interdisciplinary study of early medieval Irish language, literature and culture.

FACULTY HIGHLIGHTS

FACULTY OF ARTS, CELTIC STUDIES AND PHILOSOPHY

The Department of Early Irish continued its fruitful collaboration with the Royal Irish Academy in co-organising the Medieval Irish Manuscripts Conferences – the 4th such conference took place in 2019 and the 2nd book to arise out of the series (*The Book of Ballymote*, ed. Ruairí Ó hUiginn) was published by the Royal Irish Academy. These conferences are widely attended by the public and the talks are made freely available online on SoundCloud.

NUA-GHAEILGE

Our new internally-funded research project on 'Scríobhaithe an Tuaiscirt 1650-1900' (Scribes of the North, 1650-1900) is the first stage of an ambitious long-term research project which will produce an *Atlas Litríocht na Gaeilge* (Atlas of Literature in Irish). This project will help to build a community of researchers and an enhanced research environment by providing a detailed scholarly geographical profile of literary production in Irish over a period of 1,500 years. Its initial output will be the publication of a large multi-authored volume entitled *Atlas Litríocht na Gaeilge/ Atlas of Literature in Irish*. The project will also have a very significant outreach element centered on an interactive website aimed at local councils/heritage bodies/schools and colleges with a view to increasing awareness and sharing knowledge and resources concerning regional and local literary heritage.

Where Maynooth-specific expertise is concerned, *Atlas Litríocht na Gaeilge* will draw on scholarship in key historical periods such as the Bardic tradition and Early Modern Irish prose literature (Dr Eoghan Ó Raghallaigh and Dr Lára Ní Mhaoláin) and on expertise in a number of regional areas such as the Kerry Gaeltacht (Dr Tracey Ní Mhaonaigh), the Aran Islands (Dr Brian Ó Catháin), Donegal and East Ulster (Professor Fionntán de Brún). Dr Brian Ó Catháin's research on dialectology will also inform the linguistic commentary throughout.

Dr Eoghan Ó Raghallaigh is joint editor of *A Bardic miscellany: five hundred Bardic poems from manuscripts in Irish and British libraries* (Dublin: Department of Irish, Trinity College, 2010) and has made numerous contributions to scholarship in the field of Bardic Poetry and Early Modern Irish. His co-edited Bardic miscellany forms the basis of a new Sketch Engine database which has been developed by TCD with his assistance. Dr Lára Ní Mhaoláin is completing an edition of the Ulster Cycle tale, *Táin Bó Flíodhaise*, for the prestigious Irish Texts' Society series. This is a much anticipated edition which will be a very significant contribution to study of the Ulster Cycle. Both Dr Ó Raghallaigh and Dr Ní Mhaoláin work closely with the Russell Library, integrating the teaching of MA modules on Early Modern Irish with visits to the collections. With the assistance of the Department of Nua-Ghaeilge, the Russell Library and Dr Brian Mac Maghnuis (Oifigeach na Gaeilge) recently curated an exhibition of manuscripts and a symposium in which staff and postgraduate students of Nua-Ghaeilge gave talks on specific manuscripts.

Fionntán de Brún's AHRC (UK) project 'Rethinking Revivalism: A Conceptual Case Study in Modern Irish Literature' was completed

in March 2019 with the publication of his monograph (Cork University Press). The seminal contribution of this monograph to the study of Irish literature has been highlighted in recent reviews by Declan Kiberd (*Irish Times*), Maurice Earls (*Dublin Review of Books*) as well as by Philip O'Leary and Brian Ó Conchubhair in Cork University Press internal reviews www.corkuniversitypress.com/Revivalism-p/9781782053149.htm The reception of this book has strengthened the profile of literary studies in the Department and will provide a platform for subsequent funded research projects.



An tOllamh Fionntán de Brún

LÉACHTAÍ CHOLM CILLE AND IRISLEABHAR MHÁ NUAD

The Department hosts an annual conference, Léachtaí Cholm Cille, which celebrated its 50th anniversary in April 2019. To mark this milestone the conference took as its theme *Téamaí agus Tionscadail Taighde* (Research themes and Projects), a stock-take of current research in Irish, beginning with a keynote address by Prof. Máirín Nic Eoin (DCU) on the progress of critical discourse in Irish over the past 50 years, 'Imeall nó Tairseach? Ionad agus Éifeacht Chritic Liteartha na Gaeilge le 50 Bliain Anuas'. The proceedings of the 2018 conference on the Ó Nualláin/O'Nolan family of writers was also launched at the event, *Léachtaí Cholm Cille XLIX: Ón nGruagach Gréagach go Myles na gCopaleen: Saol agus Saothar Mhuintir Nualláin*. The 2018 conference and subsequent proceedings launch was attended by some of the relatives of this renowned literary dynasty, the most famous of whom was undoubtedly Brian Ó Nualláin (Myles na gCopaleen/Flann O'Brien).

Along with the annual conference proceedings of Léachtaí Cholm Cille, the Department hosts one of the oldest Irish academic journals, *Irisleabhar Mhá Nuad*, initiated as the Record of the League of Columba in 1898 before assuming its present title in 1907. Under the editorship of Dr Tracey Ní Mhaonaigh, the journal has allowed younger scholars to share a platform with seasoned writers such as Msgr. Breandán Ó Doibhlin, who is credited with transforming literary criticism in Irish from the 1960s onwards. The 2018 and 2019 issues feature articles by Breandán Ó Doibhlin,

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Mícheál Mac Craith, Michelle O’Riordan, Ailbhe Ní Ghearbhuigh, Nollaig Ó Muraíle, Fionntán de Brún, and Pól Ó Muirí as well as creative writing by Eimear Ní Chairbre, Katie Ní Fhaoláin, Mairéad Ní Neachtain, Megan McAuley and Eoin P. Ó Murchú.

CONTRIBUTIONS TO SCHOLARLY DATABASES AND WEB PROJECTS

During 2018–19 Dr Eoghan Ó Raghallaigh continued his work on Bardic poetry, and was a guest speaker at several events including a lecture in May 2019 at the ‘Understanding Ireland’ series held at John Paul II Catholic University of Lublin, Poland. Dr Ó Raghallaigh’s ongoing collaborative work with other institutions includes the Bardic Poetry Database (bardic.celt.dias.ie) hosted at the Dublin Institute for Advanced Studies, the Learn Early Modern Irish Project (www.leadm.org) based at the University of Connecticut, and the Royal Irish Academy’s Doegen Records Web Project (www.doegen.ie).

LÁRIONAD NA GAELIGE: TAIGHDE, TEAGASC AGUS TÁSTÁIL/CENTRE FOR IRISH LANGUAGE RESEARCH, TEACHING AND TESTING

Founded in 1971, Maynooth University Language Centre is now known as the Centre for Irish Language Research, Teaching and Testing. The Centre offers an innovative approach to the teaching of the Irish language on our courses for degree students, the wider university community, and adult learners both in the locality, nationally and internationally. It also provides training in the teaching of Irish to adults as well as online postgraduate courses in translation, and a variety of services and courses for distance and autonomous learners.

Areas of research in the Centre include language testing, the Common European Framework of Reference of Languages: Learning, Teaching, Assessment (CEFR), multilingualism, language policies, corpus linguistics, gender studies, plant lore, sean-nós singing, applied linguistics, translation studies, terminology and contemporary French literature.

Recognised both nationally and internationally as the leading Irish organisation for language test development, the Centre is three-times winner of the European Language Label for excellence and innovation in language teaching and the Irish member of the prestigious Association of Language Testers in Europe (ALTE). A major focus of the work of the Centre is the development of tests in Irish for adult learners (Teastas Eorpach na Gaeilge) which are administered in Ireland, Europe, North America and Australia. (www.teg.ie) The Centre also holds the ALTE Q-Mark which confirms that our exams, which have been audited by ALTE, adhere to ALTE’s 17 minimum standards governing test construction, administration and logistics, marking and grading, test analysis and communication with stakeholders.

OUTPUTS

As pioneers nationally in the development of tests linked to the CEFR, the Centre acts as advisor to state bodies on the CEFR and language testing and has been commissioned on several occasions to produce test-related research on aspects of Irish language learning.

In June 2019, the Centre invited Jane Lloyd of Cambridge Assessment, Cambridge University to deliver a four-part course on language testing. The course was attended by 23 colleagues, most of whom came from other Irish universities.

In keeping with the principal areas of research in the Centre, in June 2019, Dr Thomas Bak of the University of Edinburgh delivered a public lecture on the theme ‘Why our brains need languages: cognitive effects of language learning and multilingualism.’

In September 2019, Aoife Ní Ghloinn was invited as consultant to facilitate the review of Irish language curriculum and assessments in Notre Dame University, South Bend, Indiana.

Aoife Ní Ghloinn is pursuing doctoral research funded by An Chomhairle um Oideachas Gaelscolaíochta agus Gaeltachta (COGG). The aim of the project is to build a grammatically annotated corpus of written and spoken TEG exams, in order to analyse the development of grammatical competence in Irish from B1-C1 levels of the CEFR. In a separate project (2016-20), she is investigating the alignment of undergraduate Irish exams with the CEFR.

Sailí Ní Dhroighneáin is conducting doctoral research on the traditional medicine practised in Ireland to cure animal diseases in the 18th to 20th centuries, primarily from folklore sources.

Dr Seán Mac Risteaird presented and published on sexuality in the work of Connemara author Mícheál Ó Conghaile.



Anne Gallagher

Anna Ní Ghallachair published a chapter on the image of Ireland in modern French literature in Ireland in the European Eye (RIA, 2019) and

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on European language policies in a publication on Tandem Learning for an American readership (Taylor and Francis). In September 2019 she was invited to speak on the image of Irish women in French literature at the Turas na mBan conference in Louisburgh, Co Mayo.

PUBLICATIONS

- > Gallagher, A. (2019) 'Language Policies and Multilingualism: A European Perspective' In Tardieu, C and Horgues, C. (eds.), *Redefining Tandem Language and Culture Learning in Higher Education*. New York: Routledge.
- > Gallagher, A. (2019) 'Destination of the imagination: representations of Ireland in modern French literature' In Migge, B. and Holfter, G. (eds.), *Ireland in the European Eye*. Dublin: Royal Irish Academy.
- > Mac Risteaird, S. (2018) 'An Teacht Amach Aniar: Collaíocht, Corp agus Rúin i Saothair Liteartha Mhichíl Uí Chonghaile' In: Ó Dúshláine, Ní Mhaonaigh, Mac Amhlaigh, Ó Dochartaigh (eagarthóir). *Irisleabhar Mhá Nuad 2018*. Maigh Nuad: An Sagart.
- > Ní Ghloinn, A. (forthcoming). 'Corpas Foghlaimeora TEG agus Tionscadal Próifílithe na Gaeilge'. In Eoghan sssÓ Raghallaigh (eag.), *Léachtaí Cholm Cille 50: Comóradh an Leathchéid: Téamaí agus Tionscadail Taighde*.

CONFERENCE CONTRIBUTIONS

Aoife Ní Ghloinn

- > April 2019: 'Corpas Foghlaimeora TEG agus Tionscadal Próifílithe na Gaeilge', Invited lecture as part of Léachtaí Cholm Cille 50: Comóradh an Leathchéid: Téamaí agus Tionscadail Taighde, Maynooth University.
- > February 2019: 'B2 or not B2? Sin í an cheist! An Fráma Tagartha Comónta Eorpach agus measúnú na Gaeilge ag an tríú leibhéal.' Guest lecture as part of the 'Ó Thrácht go Twitter' seminar series, University College Dublin.

Dr Seán Mac Risteaird

- > 'Na Queeranaí a joineáil: An Chrúsáil Chollaíoch i ngearrscéalta agus in Sna Fir Mhichíl Uí Chonghaile'. Conradh na Gaeilge.

Anna Ní Ghallachair

- > 'An Ghaeltacht; Cá bhfuil ár dtríail? 'Cill Áirne, Samhain 2018.
- > 'Irish women in modern French literature', Turas na mBan, Louisburgh, September 2019.

EXTERNAL ASSIGNMENTS AND PUBLIC SERVICE

In September 2018, the Centre was invited by the Department of Education and Skills to provide the Irish language testing for all prospective candidates applying for the new Baitsiléir san Oideachas Trí Mheán na Gaeilge (Bunmhúinteoireacht), the M. Oid.

san Oideachas lán-Ghaeilge and the well-established PME (Primary Teaching). In total, 1,780 candidates registered for the tests, a 120% increase on the previous year's candidature.

IRISH CULTURAL HERITAGE

Dr Mary Leenane is currently working on a book publication on the characterisation of Cú Chulainn, with emphasis on the notion of heroic biography and related themes. Some insights into her findings have been presented at various conferences and published in, for example, *Ulidia 3* (2013) and *Ulidia 5* (forthcoming).

Dr Leenane is also conducting research into representation of elite figures in early Irish literature. She was invited to deliver a keynote address on this work at the *41st Californian Celtic Conference* (UC Berkeley); related aspects were also presented at the *33rd Conference of Irish Medievalists*, University College Cork; the *XVIth International Congress of Celtic Studies* (Bangor University); and more recently at the *39th Harvard Celtic Colloquium* (Harvard University). The latter paper is being prepared for submission for publication in the *Proceedings of the Harvard Celtic Colloquium 39*. (Dec 2019). An interdisciplinary assessment of brooches and mantles is also being prepared for publication.

Building on her involvement in the Black Pig's Dyke regional research project, Dr Leenane is also examining the various ways in which characters are affixed to specific places and landscapes with a view to providing a better understanding of the related narrative creation process. This research was presented at the *Ulidia VI- Fíanaigeacht III Conference in Sabhal Mòr Ostaig*, Isle of Skye and is scheduled for inclusion in the conference proceedings. Dr Leenane is also currently working on early Irish death narratives, which work will be presented at conferences in 2020.

The Moynagh Lough project concerns the publication of this, nationally important, crannog excavation carried out by our late colleague John Bradley of the History Department, Maynooth University. The research is led by Dr Michael Potterton (of the same department) and Dr Eoin Grogan (Irish Cultural Heritage) has undertaken the research and reporting on the very extensive Bronze Age phases of the site. This year, substantial work has been completed on the ceramic component of the assemblage. This project is funded by the Royal Irish Academy with support from Maynooth University.

The study of the Bronze Age cemetery at Carrig, Co, Wicklow, funded by the National Museum of Ireland, is engaged in the publication of the rich funerary complex at Carrig and the extensive Bronze Age landscape in the local area overlooking the Liffey Valley. The site was, uniquely, in use for over 1,000 years (c. 2000–800 BC) and produced an important assemblage of associated (and intact) Bronze Age pottery, copper alloy implements and (locally manufactured) *faience beads*. Dr Grogan presented a paper on the site to the Carlow Historical and Archaeological Society (*Excavations*

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at Carrig, Co. Wicklow: a Bronze Age family cemetery) in May 2019. The first stage of a project involving The Bronze Age hilltop cemetery complex: Ballon Hill, Co. Carlow – the analysis and publication of the largely nineteenth century investigations of this important Bronze Age landscape—has been completed and published (O’Neil, Grogan et al. 2018; Grogan and Roche 2014a; 2014b).

CONFERENCE CONTRIBUTIONS

- > Leenane, M. 2019 Functional or symbolic? A consideration of cloak and brooch wearing in early Irish literature, *41st California Celtic Conference*, 15-17 March, University of California, Berkeley.
- > Leenane, M. 2019 Making clothing meaningful in early Irish literature, *XVIth International Congress of Celtic Studies*, 12-26 July, Bangor University.
- > Leenane, M. 2019 Insinuating royalty in early Irish literature, *33rd Conference of Irish Medievalists*, University College Cork.
- > Leenane, M. 2019 Visualising the elite in early Irish society, *39th Harvard Celtic Colloquium*, Harvard University.

DEPARTMENT OF ENGLISH

The academic year 2018-19 was an especially notable one for Maynooth University Department of English. Staff member Professor Pat Palmer received an IRC Advanced Laureate Award valued at just under €1million for MACMORRIS. This 4-year research project, which recovers the diverse, multilingual world of early modern Ireland, brings to the Department 2 Postdoctoral fellows and a PhD student. The Department was also ranked as one of the top 250 in the world in the QS World University Rankings by Subject. QS ranks Departments on their academic reputation, the employability of their graduates, the prominence of their research output and research citations. This ranking is a result of the hard work and dedication of all staff and research students in Maynooth University Department of English.



Mapping Actors and Contexts: Modelling Research in Renaissance Ireland in the Sixteenth and Seventeenth Century

ABOUT MACMORRIS

The project maps the full range of cultural activity, across languages and ethnic groups, in Ireland from 1541 to 1691 and reminds us just how rich and complex the wellsprings of Irish culture are. It opens a window on a world on the cusp of drastic change but where everything is still in play: Gaelic culture is vibrant; the English vernacular of the Pale is lively and colourful; agents of the Tudor conquest like Edmund Spenser bring the energies – often dark energies – of the English Renaissance to Ireland; and contact with mainland Europe is routine. First, MACMORRIS builds a dataset of biographical metadata for everyone for whom records exist active in Ireland between 1541 and 1591, so as to identify cultural producers of all kinds and across languages. Second, MACMORRIS focuses on Munster in the period 1569–1607 and provides bibliographical and textual material associated with cultural actors in this region. This material will be visualised, using geolocation to map the principal actors in their places of residence and to plot relationships of patronage and exchange. The project runs from 2019–2023.

PUBLICATIONS

In addition to this success in funded research, Department staff continue to contribute to and enhance the Department’s international profile through publication: in 2018, staff published 2 edited books, 17 book chapters, and 8 peer-reviewed journal articles.

Dr James Fraser co-edited *Joyce’s Non-Fiction Writings: “Outside His Jurisdiction”* (Palgrave), which featured an essay by staff member Professor Emer Nolan, broadens critical work on Joyce’s oeuvre. Professor Nolan’s monograph, *Five Irish Women* was published by Manchester UP in October 2019. Dr Stephen O’Neill edited *Broadcast Your Shakespeare: Continuity and Change Across Media* (Arden Shakespeare / Bloomsbury), a volume exploring how Shakespeare’s works are remediated across a range of media forms. Book chapters published continue to demonstrate the depth, range, and international impact of the Department’s research, with staff members publishing in major prestige University presses. Dr Denis Condon published 3 chapters ranging from women and concern musicians in the Irish picture house to an analysis of Irish historical bodies in early cinema. Dr Michael Cronin published a chapter on Irish writing after Joyce in the *Oxford History of the Novel in English*, and another on Anglo-Irish perspectives on British fiction.

The novel form appeared in the publications output of Dr Catherine Gander, whose chapter on temporality in Don DeLillo’s *Point Omega* appeared in a major new critical appraisal of the American writer’s body of work, *Contemporary Critical Perspectives on Don DeLillo* (Bloomsbury Academic). Dr Gander’s research also featured in the DeLillo symposium that the Department hosted in 2017. Dr Sinead Kennedy co-authored chapters on Abortion rights in Ireland and the Repeal movement. In early modern and Shakespeare studies, Dr Stephen O’Neill’s chapter on Shakespeare quotations

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on Twitter and other digital platforms appeared in Cambridge UP's *Shakespeare and Quotation*, while Professor Palmer's research on Ireland's forgotten Renaissance – work that informs her MACMORRIS project – appeared in the essay collection *Becoming and Belonging in Ireland 1200-1600*. Dr Rita Sakr's chapter on Rawi Hage's *Cockroach* appeared in Toronto UP's *Contested Spaces, Counter-narratives, and Culture from Below in Canada and Quebec*.



Dr Catherine Gander

Department staff published in peer-review journals of international standing, including *Textual Practice*, with Dr Catherine Gander's "Poetry as Embodied Experience: the Pragmatist Aesthetics of Muriel Rukeyser's *The Life of Poetry*"; *Literature Compass*, with Dr Stephen O'Neill and Professor Pat Palmer each contributing to a special issue on Ireland and the Renaissance; the *Journal of Postcolonial Writing on Refugee Literature*, with Dr Rita Sakr's article on Hassan Blasim's short stories; *Boundary, 2*, with Dr Michael Cronin's article on "Modernization and Sexuality in Contemporary Irish Scholarship"; and *Social Research*, with Dr James Fraser's "*The Exile and the University in Exile: Betrayal as Work in the Writings of James Joyce*". As these publications attest, Maynooth University Department of English continues to make significant contributions to knowledge across a diverse range of areas from American poetry and Iraqi writing to the representations of Ireland across periods and forms.

CONFERENCES AND EVENTS HOSTED

In February 2018, Dr James Fraser organised a symposium "On your bike: how the bicycle influenced literature and art", which was supported through an early career researcher grant from the Arts and Humanities Institute. In November 2018, Dr Stephen O'Neill and Professor Pat Palmer (2018) organised the conference "Earth Songs: Eco-Criticism and Early Modern Studies", with speakers including Dr Gwilym Jones and Dr Deana Rankin, as part of the bi-annual Irish Renaissance Seminar. In November 2019, Dr Stephen O'Neill organised "Kylie: The Symposium", an international

conference on the Australian pop star held in Maynooth University over two days. The conference generated high media interest, including a feature in *The Irish Times* Culture, an RTÉ Brainstorm article, and radio interviews.

SEMINAR SERIES AND WRITERS-IN-RESIDENCE

The Department Research seminar series continued its long tradition of invited international speakers as well as papers from staff members and researchers. Speakers in 2018/19 included Professor Stefan Collini (Cambridge University) who spoke on "Quality control: academic disciplines and the future of universities"; the Department's IRC Postdoctoral fellow Dr Niamh Campbell; and Dr Catherine Morris (NUI Galway), who read from and discussed her work *Intimate Power: Autobiography of a City*.

The 2018 Maynooth University Writers-in-Residence, Paul Lynch and Christodoulos Makris, read from their work in November 2018. Readings by the 2019 Maynooth University Writers-in-Residence Annemarie Ni Churreáin and Sue Rainsford took place in December 2019. This event, which marks the 5th year of the residency, a collaboration between Maynooth University and Kildare County Council, was followed by readings from other creative writers among the Department staff and student body.

AWARDS AND OTHER ACHIEVEMENTS

Professor Pat Palmer was named Maynooth University Researcher of the Year for the Faculty of Arts Celtic Studies and Philosophy in recognition of her IRC funded project MACMORRIS.

Dr Matthew Fogarty, who graduated with his PhD in September 2019, received a Postgraduate Award 2018 for his work on the MU Postgraduate Feedback Council and for establishing and convening the Doctoral Researchers Writing Group.

Dr Catherine Gander was elected Chair of the all-island Irish Association for American Studies, which promotes the culture as well as the study of the United States in Ireland. The next IAAS conference will be held in Maynooth University.

Maynooth University Department of English is in the process of establishing an ERASMUS + Strategic Partnership with the Department of English, University of Malta, a Mediterranean hub for international academic exchange. The agreement will provide for research and postgraduate teaching collaborations in the future, especially with regard to Maynooth University Department of English's MA Literatures of Engagement.

Dr Catherine Gander established CRISES (Critical Research in States, Ecologies, and Societies), which is co-funded by the Department and the MU Arts and Humanities Institute.

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ENGAGED RESEARCH

> SALAM-Ireland: Arabic-speaking adolescents

Dr Rita Sakr is co-investigator on SALAM-Ireland, a funded project with Professor Sinead McGilloway (Maynooth University Department of Psychology and Principal Investigator-Founder Director, Maynooth Centre for Mental Health and Community Research) and Dr Anthony Malone (Maynooth University Department of Education and co-investigator). The project, part of an international collaborative research programme based at the University of Washington in St Louis, uses mixed-methods research to assess the psychosocial needs of first-generation Arabic-speaking adolescents (in Ireland in the case of Maynooth) and to identify potential school-based strategies to foster support for this population.

> Diversifying the Irish Poetry scene

Dr Catherine Gander is liaising with the Irish Writers Centre to develop a Ledbury Emerging Poetry Critics Programme in Ireland to address and promote diversity and equality in Irish poetry.

> Writers and the community

Maynooth University Writers-in-Residence, a partnership with Kildare County Council, is now in its 5th year and continues to enrich the cultural life of the University and region, with regular events and readings throughout the year.

DEPARTMENT OF HISTORY

In 2018-19 the Department of History once again demonstrated its standing as a significant centre of research in Maynooth.



Professor Filipe Ribeiro de Meneses

2018 saw a number of monographs and edited volumes originate in the Department and its associated centres. Filipe Ribeiro de Meneses published *De Lisboa a La Lys: O Corpo Expedicionário Português na Primeira Guerra Mundial* (Lisbon: Dom Quixote), the latest in a long list of publications dedicated to Portugal's participation in the Great War. He also published, with Robert McNamara (University of Ulster) *The White Redoubt, the Great Powers and the Struggle for*

Southern Africa (London: Palgrave), the culmination of an IRCHSS-sponsored project examining the diplomatic, intelligence and military links between Portugal, Rhodesia and South Africa in the 1960s and 70s. JoAnne Mancini published *Art and War in the Pacific World: Making, Breaking and Taking from Anson's Voyage to the Philippine-American War* (Oakland: University of California Press), an innovative exploration of looting in British and American colonialism that integrates the study of material culture with political and social history. Jennifer Redmond published her first monograph, *Moving Histories: Irish Women's Emigration to Britain from Independence to Republic* (Liverpool: Liverpool University Press), a sustained exploration of an under-researched topic that sheds light on the experiences undergone by Irish women in Britain – and the commentary their actions generated at home. Viktoriya Fedorchak, of the Department's Centre for Military History and Strategic Studies, published *British Air Power: The Doctrinal Path to Jointery* (London: Bloomsbury), an examination of the RAF's evolving mission at a time of rapid political, technological and strategic change, while Ida Milne, then an IRC-backed postdoctoral researcher, published her book 'Stacking the Coffins: Influenza, War and Revolution in Ireland, 1918-19' (Manchester: Manchester University Press). Worthy of mention as well is the publication in Serbian of John Paul Newman's book on Yugoslav veterans of the Great War – *Jugoslavija u senci rata ratni veteran I stvaranje nove države 1903-1945* (Belgrade, Službeni glasnik).

Alongside Judith Devlin and Maria Falina, John Paul Newman co-edited *World War One in Central and Eastern Europe: Politics, Conflict and Military Experience* (London: I.B. Tauris), further strengthening the Department's reputation as a centre for international Great War scholarship. Jonathan Wright co-edited, with Georgina Laragy and Olwen Purdue, *Urban Spaces in Nineteenth-Century Ireland* (Liverpool: Liverpool University Press), which employs a spatial approach to explore how certain urban spaces were constructed and experienced. Lastly, Terence Dooley co-edited *Women and the Country House in Ireland and Britain* (Dublin: Four Courts Press) with Maeve O'Riordan and Christopher Ridgway. This is the latest in a long line of publications produced under the aegis of the Centre for the Study of Historic Irish Houses and Estates.



The four-volume Cambridge History of Ireland (Cambridge: Cambridge University Press)

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The landmark four-volume *Cambridge History of Ireland* (Cambridge: Cambridge University Press) under the overall supervision of Tom Bartlett, included a number of contributions by members of the Maynooth History Department. Volume 1, edited by Brendan Smith, featured the chapter 'The Onset of Religious Reform, 1460-1550', by Marian Lyons. Volume 2, edited by Jane Ohlmeyer, numbered contributions by Colm Lennon ('Protestant Reformations, 1550-1641') and Raymond Gillespie ('Economic Life, 1550-1730'). Volume 3, edited by James Kelly, included the chapter 'The Catholic Church and Catholics in an Era of Sanctions and Restraints, 1690-1790', written by Thomas O'Connor. Finally, Volume 4, edited by Tom Bartlett, included the chapter 'Irish Land Questions 1879-1923', by Terence Dooley.

Numerous other members of the Department published chapters in edited volumes. Filipe Ribeiro de Meneses wrote a chapter on Portuguese Africa in *Portugal na Primeira Guerra Mundial: Uma História Militar Concisa* (Lisbon: Comissão Portuguesa de História Militar), published by the official body charged by the Portuguese state with the official commemoration of the First World War. He also contributed a chapter, 'Ni Union ni Sacrée: Le Portugal en Guerre, 1916-1917', to Laurent Dornel & Stéphane le Bras' volume, *Les Fronts Intérieurs Européens : L'Arrière en Guerre (1914-1920)* (Rennes : Presses Universitaires de Rennes). John Paul Newman had chapters published in significant international collaborations, such as Timothy Snyder & Katherine Younger, *The Balkans as Europe, 1821-1914* (Rochester: University of Rochester Press), Richard Bessel & Dorothee Wierling, *Inside World War One? The First World War and its Witnesses* (Oxford: Oxford University Press) and Paul Miller & Claire Morelon, *Embers of Empire: Continuity and Rupture in the Habsburg Successor States after 1918* (London & New York: Berghahn). Ian Speller was responsible for the chapter on Ireland in *The Handbook of European Defence Policies and Armed Forces* (Oxford: Oxford University Press), edited by Hugo Meijer and Marco Weiss. David Murphy published 'The French Army in 1918': *Winning the War, Losing the War* (London: Osprey), edited by Matthias Strohn. Raymond Gillespie contributed 'Colonial Towns, 1500-1700: Carrickfergus, Downpatrick and Belfast' to H.B. Clarke and Sara Gearty (eds), *More Maps and Texts: Sources and the Irish Historic Towns Atlas*, published by the Royal Irish Academy. Jonathan Wright co-authored the Introduction to the edited volume listed above and contributed a chapter, entitled "'The Donegalls' Backside": Donegall Place, the White Linen Hall and the Development of Space and Place in Nineteenth-Century Ireland'. Finally, Ida Milne contributed 'Dublin's Poor Children in a Transitional Ireland – Disease, Agents of Change... and Flies' to *Historical Perspectives on Parenthood and Childhood in Ireland*, edited by Mary Hatfield, Jutta Kruse and Riona Nic Congáil (Syracuse NY: Syracuse University Press).

Alongside Elaine Farrell, Jennifer Redmond co-edited and co-introduced a special edition of the *Women's History Review* (Vol. 27, n.3).

There were, finally, numerous peer-review articles published by members of the Department of History. Filipe Ribeiro de Meneses had articles on the Portuguese Expeditionary Corps in France (1917-1918) published in the *Journal of Military History* Vol. 82 (4) and the *E-Journal of Portuguese History* (Brown University & University of Oporto), Vol. 16 (2). David Lederer, in collaboration with Maria Teresa Brancaccio, published on the subject of suicide statistics in nineteenth-century Germany and Italy in *Crimino Corpus* (May). John Paul Newman published on the care of disabled veterans in the Habsburg army in the 1840s and 50s in the *Austrian History Yearbook* Vol. 49. Finally, Raymond Gillespie examined the life of a Huguenot family in Dublin in a contribution to the *Dublin Historical Record* Vol. 71 (1).

2018 saw the publication of six more pamphlets in the long-running Maynooth Studies in Local History Series, edited by Raymond Gillespie, with works written by Tadhg O'Keefe, Michael Nolan, Cathal Smith, Gerard Moran, Heather Stanfiel and Catherine Flanagan.



The Department is currently home to three IRC-funded research projects. Dr Frances Nolan began her postdoctoral project, entitled 'The Cat's Paw? Jacobite Irishwomen, 1685-1718'. Seán Ó Hoireabhárd, meanwhile, is continuing to research his PhD thesis, 'The Storm Before the Storm: The Irish 12th Century and the Impact of the English Invasion', while Sven Milekic continued his project on 'Croatian 1990s War Veterans: Creators or Transistor of the Homeland War Narrative?' The Department is delighted as well to have seen one of its students, Eamonn Milliken, awarded a major John & Pat Hume doctoral scholarship, for a proposed thesis on Austrian veterans of the Great War. Two other doctoral students, Veronica Barry and Cora McDonagh, were given minor awards by the John & Pat Hume scheme.

As is customary, a number of conferences were hosted by the Department. These included the 17th Annual Historic Houses

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Conference, entitled 'Country House Collections: Their Past, Present and Future'. The sessions for this event were held in Maynooth University, Castletown House, and the National Gallery of Ireland, 13-15 May 2019. John Paul Newman was responsible for two events, '1918 and the Old-New Europe', a one-day conference marking the hundredth anniversary of the ending of the First World War and involving twelve speakers, and 'Forging the Nation: Establishing National Armies in the Balkans, 1804-1914', a one-day workshop involving eight contributors. Worthy of mention was the one-day conference organized by some of the Department's PhD candidates, entitled 'Central and Eastern Europe in Transition'. Held on 26 April 2019, this pioneering event brought postgraduate speakers from all over Ireland to Maynooth.

The Department's Research Seminar once again demonstrated the vital role it plays in bringing world-class historians to address Maynooth staff and students alike. Seventeen sessions were organised throughout the year, with the invited speakers including Natalia Zacek (University of Manchester), Nigel de Lee (University of Hull), Iskra Iveljic (University of Zagreb), Paul Moyer (SUNY Brockport) and Larry Goodson (US Army War College, Carlisle PA).

Finally, members of the Department presented their research findings at numerous seminars and conferences. Worthy of special mention is Jennifer Redmond, who gave a paper entitled 'Was there an Irish Voice in 19th Century British Suffrage Debates? Investigating Parliamentary Petitions and Speeches' at the Oxford University Women in Humanities conference (October 2018). She also gave one of the keynote speeches at the Women's History Association of Ireland Conference, held in UCC (April 2019). During the subsequent summer, she was an invited speaker at the Parnell Summer School, speaking on 'Venturing Beyond Borders: Irish Women's Emigration and the "Problematic" Diaspora of the 19th and 20th Centuries'. Ian Speller, meanwhile, delivered a lecture to the Brazilian Naval War College, in Rio de Janeiro, and addressed a NATO conference in Stavanger, Norway.

Terence Dooley and Donal Hall completed a consultancy commissioned by the Department of Culture, Heritage and Gaeltacht - *Historical survey of the Provenance of 10-25 Moore Street, Dublin, 1901-1970*.

SCHOOL OF MODERN LANGUAGES, LITERATURES AND CULTURES

The School of Modern Languages, Literatures and Cultures (SMLLC) encompasses Chinese Studies, French Studies, German Studies and Spanish & Latin American Studies. The School has a very international outlook, and research carried out in the SMLLC is regularly presented and published in multiple languages.



Streiflichter zur deutsch-jüdischen Literaturgeschichte: Selbstbild - Fremdbild - Dialog. (Haskala - Wissenschaftliche Abhandlungen)

2018 was a noteworthy year for the School of Modern Languages, Literatures and Cultures with 55 publications in total (including 11 conference contributions). Researchers produced two monographs and two edited volumes. Of particular note was Dr Zhouxiang Lu's monograph on *Politics and Identity in Chinese Martial Arts* and his co-edited book *Olympics in Conflict: From the Games of the New Emerging Forces to the Rio Olympics*, both published by Routledge. Professor Florian Krobb also published a monograph (with the German publisher Olms) with the title *Streiflichter zur deutsch-jüdischen Literaturgeschichte. Selbstbild – Fremdbild – Dialog* on issues in German-Jewish literary history investigated in terms of images of self and other and their dialogic engagement. In recognition of his research achievements in German literature in general but with specific reference to his ground-breaking work on German colonial literature, Professor Krobb was appointed Professor Extraordinary in the Department of Modern Foreign Languages at Stellenbosch University (South Africa), Africa's third-ranking University. Other notable publications in 2018 were a companion on the Swiss author Robert Walser, co-edited by Dr Valerie Heffernan and published with the Northwestern Press. Dr Heffernan also co-edited a special issue of the Q1-ranked journal *Women. A Cultural Review* on the topic 'Imagining Motherhood in the Twenty-first Century'.

Researchers in the SMLLC published a total of 11 chapters in edited books which included Professor Whelan's chapter 'Comment faire voir les vérités évangéliques? Le tableau dans les sermons de Jacques Abbadié', in *L'éloquence de la chaire entre écriture et oralité (XIIIe-XVIIIe siècles)*, éd. Gabriel Aubert, Amy Heneveld, Cinthia Meli (Paris: Champion), Dr Catherine Leen's essay 'From Don Juan to Dolores Huerta: Foundational Chicana/o Films' in *The Routledge Handbook of Chicana/o Studies*, ed. Denise Segura, Francisco E. Lomelí, Elyette Benjamin, and Professor Krobb's book chapter 'Wilhelm Raabe und Gustav Frenssen. Zur Konvergenz des Ungleichzeitigen' in *Kein Nobelpreis für Frenssen. Eine Fallstudie*

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zu *Moderne und Antimoderne*, ed. Heinrich Detering and Kai Sina (Heide: Boyens). Other publications included 10 book reviews and two encyclopedia entries, namely Dr Catherine Lee's entry 'La vaquilla' in *The Encyclopedia of Contemporary Spanish Films* and Dr David Conlon's contribution 'Get Out' in the *Encyclopedia of Racism in American Films*.

In 2018, members of the School produced 14 articles in peer-reviewed journals. These include Dr Ana de Prada Pérez' article on 'Theoretical implications of research on bilingual subject production: The Vulnerability Hypothesis' in *The International Journal of Bilingualism*, Professor Whelan's article 'L'heuristique des galères. La Bible du forçat Élie Neau' in *Revue Bossuet*, Dr Clive W. Earls contribution 'Popping the Erasmus Bubble: Perceptions of Intercultural Awareness and Competence of Incoming Erasmus+ Students and the Preparation Challenge' in *Higher Education Research*, Dr Ana de Prada Pérez' article on 'Subject Pronoun Expression and Language Mode in Bilingual Spanish' in *Studies in Hispanic and Lusophone Linguistics*, and Dr David Conlon's essay 'Discourse with the Incorporeal Air: Spectres of Walsh in Plata quemada' in the *Bulletin of Hispanic Studies*. Professor Arnd Witte's article 'Selbstreflexivität und Resonanzachtsamkeit im interkulturellen Fremdsprachenlernprozess: Leiblich resonantes Lernen', published in *Germanistik in Ireland*, elaborated on the relevance of the sensing body and its situation-specific resonances for the process of intercultural foreign language learning. Noteworthy peer-reviewed entries in yearbooks include Professor Florian Krobb's article on 'Rupture and Dissolution: Gertrud Kolmar's Prose Works and Modernity' in the prestigious *Leo Baeck Institute Yearbook*.

Contributions to conferences were also a significant factor in research dissemination. In 2018 members of the SMLLC were speaking to international audiences in the UK, Austria, Germany, Spain, France, China, Malta, and South Africa. In total, 15 conference contributions were made. These included a public Lecture on 'German Constructions of the Boers in 19th-Century Travel Writing' by Professor Florian Krobb, delivered in the Department of Modern Foreign Languages, University of Stellenbosch in March 2018 and another paper by Professor Krobb on 'Wallensteins Mörder in der Geschichtsschreibung von Thomas Carve bis Schiller', presented at the conference on *Der Dreißigjährige Krieg – Ereignis und Narration* at the Alpen-Adria-Universität Klagenfurt, Austria. Professor Ruth Whelan presented the paper 'From the virtual to the real geographies of the Republic of Letters' at the *Third Annual Conference of COST Action IS1310 Reassembling the Republic of Letters* at the University of Malta in Valletta in February 2018. This was her concluding lecture to the COST funded project, which brought together over a four-year period (2014-2018) representatives from 28 European countries, including two appointed for Ireland. Dr Yinya Liu presented a

paper on 'Some Genetic Ideas on Ideogrammatic Writing for a Metaphysical Consideration of Artificial Intelligence' at the *World Congress on Metaphysics*, Salamanca, Spain; Dr Lu Zhouxiang gave a paper on 'Shaolin Fever: The Revival and Development of Shaolin in the Era of Reform and Opening Up' at the conference on *Crossing Boundaries and Engaging Communities in the Process of ASEAN-China Regional Integration* in July 2018 at Chongqing University, China; Dr Julie Rodgers was an invited speaker at Nottingham Trent University on the topic of 'Narratives of traumatic pregnancy' in November 2018, and she was also invited by the Irish Canadian University Foundation to give a keynote at the D'Arcy Magee summer school in Carlingford (August 2018) on the topic of feminist writing in Québec.

Dr Clive Earls was invited by National University of Ireland as keynote speaker and discussant at the NUI-UCC Symposium on Ireland's Languages Connect Strategy in November 2018 at UCC. His paper has subsequently been published by the National University of Ireland in its publication *Education and Society, Occasional Papers No. 1*. As a result of this and the National Forum-funded project, Dr Earls has been invited as part of the consortium to join the Foreign Language Advisory Group (FLAG) to input into the implementation of the national *Languages Connect* strategy which aims at significantly investing in the expansion of foreign language provision at second level in Ireland.



Dr Earls' involvement in language policy development and language enhancement is, among other outlets, expressed through his membership in the four-institution consortium (UCC, MU, DCU and WIT). This consortium's collaborative research project (entitled HELECs) was in early 2019 awarded the top-level award of €150,000 by the National Forum for the Enhancement of Teaching and Learning in Higher Education in Ireland. The outcomes of the research project are likely to contribute positively towards achieving some of the aims of the *Languages Connect* national strategy.

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DEPARTMENT OF MEDIA STUDIES

In 2018/19, the Department of Media Studies continued its internationally and nationally recognised critical engagement with Irish and global media environments. Researchers in the department were involved in a range of funded and unfunded projects engaged with industry and the civic sector, as well as dealing with important critical areas of concern such as race, racism, gender equality, and cultural history.



Dr Anne O'Brien

Media Studies researchers were involved in a range of ongoing projects involving both community, industry, and policy engagements. Dr Anne O'Brien presented "Reporting Mental Health & Suicide: Challenges Facing Journalists" (published by Headline), the final report from the Headline National Media Monitoring Agency project on suicide and mental health reporting. This report is currently being used to guide best reporting practice in Irish journalism. Dr Jeneen Naji continued her role as co-principal investigator of the SFI-funded Building City Dashboards project, involving a range of civic stakeholders in discussion about the nature and function of urban data and its interfaces. Dr Gavan Titley also continued his research in the Racisms and Public Communication in the Hybrid Media System (HYBRA) project funded by the Academy of Finland, and presented findings from his research into race and hate speech to the Irish Human Rights and Equality Commission, as well as presenting on his other commissioned project on intercultural learning to a Consultative Committee of the Council of Europe. Dr Kylie Jarrett continued her role as Western European Regional Coordinator for action 1 of the Erasmus+ Jean Monnet project, Creative Industries and the Digital Economy as Drivers of EU Integration and Innovation, which brought together creative industry analysts from across Europe, Australia, and Russia to discuss emerging challenges in the creative sector.

In 2018/19 Media Studies staff members also pursued new research projects involving critical industry, cultural, and civic engagement. Dr O'Brien secured an industry funded project with Community

Foundation Ireland to research representations of domestic violence in Irish media. She also tendered for a consultancy with the Broadcasting Authority of Ireland to research gender and diversity in Irish media to begin in December 2019. Postdoctoral researcher Dr Sarah Culhane began a Marie Skłodowska-Curie Actions co-funded Collaborative Research Fellowships for a Responsive and Innovative Europe (CAROLINE) fellowship to research and record Irish cinema-going history, and which has involved working with Age Action Ireland to facilitate community workshops across the country. Doctoral candidate Michael Kurzmeier (supervisor Dr Jarrett) secured an IRC postdoctoral research fellowship to continue his project on hacking, archives, and public memory. Dr Sarah Arnold also secured internal funding from the Centre for Teaching and Learning workshop fund for a symposium on best practice for practice-based PhD supervision. Researchers in the department also received other small internal grants from the Maynooth University Publication Fund and to run workshops, conferences, and symposia.

Researchers within the Department also continued their public engagement through board membership and advisory roles in media industry organisations and NGOs connected to their research specialism such as Liffey Sound, the Irish Film Institute, Social Justice Ireland, Safe Ireland, Women's Aid, and Headline. Community engagement was also articulated through the dissemination of department research in a range of publicly accessible forms, in particular Dr Denis Condon's *Early Irish Cinema* blog, and through a range of media engagements which included interviews on Newstalk, LMF, RTÉ Brainstorm, *Hot Press*, as well as Dr Stephanie Rains appearance in *Tríd an Lionsa*, a TG4 documentary on photographic history. Dr Condon also continued his involvement in the Maynooth Film For All film club managed by the Kildare County Council which is an important, long-term engagement linking the Department's research concentration to the local Maynooth community.

Key publications in 2018 included an edited collection *Vocal Projections: Voices in Documentary* (Bloomsbury) co-edited by Professor Maria Pramaggiore with Annabelle Honess Roe and in which Professor Pramaggiore also had a chapter. Across the department, staff published a further 7 journal articles and 1 other book chapter on topics as diverse as image and sound in early Irish cinema; audience research and gender; rural Italian film audiences; the political economy of digital writing; feminist theoretical critiques; textual animation and Islamic calligraphy; gender and sexuality in the Irish radio sector; and media coverage of Iraq war protests at Shannon airport. Dr Javad Khajavi's creative works – *Muqarnas* and *The Third Script* – were also presented in the UK, Portugal, the US, the Netherlands, Germany, and Norway. *The Third Script* also won a Special Mention Award for Creativity at the Craft International Animation Festival in Indonesia.

The expertise of the Department was also recognised in a range of international and national invited academic speaking engagements

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and visiting fellowships. Dr Jarrett was Visiting Fellow at the Valente Centre at Bentley University in Boston, presenting an invited talk and a series of research seminars. She also gave a second invited talk at Paris-Nanterre University and was interviewed about her research on digital labour by French online academic magazine *Revue Période*. This interview was then republished in English in *Historical Materialism* online journal. Dr O'Brien was a keynote speaker at the Headline Media Forum and also spoke on media reporting of domestic violence and intimate partner homicide at the Safe Ireland World Summit. As well as presenting to the Irish Human Rights Committee and the Council of Europe, Dr Titley was invited speaker at 4 symposia in the UK and Scandinavia. Dr Arnold was an invited speaker at the International Federation of Archives conference in Mexico City and, finally, Dr Condon was invited to present his research at two national events.

In 2018, the Department also hosted or co-hosted a variety of research events targeting both international and national researchers: Researching Women and Media; the inaugural conference of the Audience Studies Network; Research on Repeal; Creative Work and the Digital Economy (part of Erasmus+ funded action); The Far-Right in the Hybrid Media System (hosted in Finland); and Women and New Hollywood. Researchers in the department were also busy working on a series of book publications and journal articles.

ENGAGED RESEARCH

> Reporting Mental Health and Suicide: Challenges facing journalist

The final report from this industry funded project was presented in 18/19 and made specific recommendations for change to reporting practices on mental ill health and suicide that stimulated debate in media industries and which formed the basis of strategic planning and policy development for Ireland's national media programme on suicide and mental illness reporting. Researcher: Dr Anne O'Brien.

> Changing Media Cultures: Domestic Violence

Funded by the Community Foundation for Ireland, this project maps media reporting on intimate partner homicides and has formed the basis for an engagement between Safe Ireland, Women's Aid, and the National Union of Journalists on changing guidelines for reporting. Researcher: Dr Anne O'Brien.

> Irish Cinema Audiences: 1950-1960

This oral history project has involved working with Age Action Ireland to facilitate multiple memory sharing workshops with members of the Irish aged community on their cinema experiences. The project has worked directly with a number of Age Action's University of the Third Age (U3A) groups across the country and included involvement in Positive Ageing Week. Researcher: Dr Sarah Culhane.

> Building City Dashboards

This Science Foundation Ireland funded research project addresses how to build more extensive and effective city dashboards and involves a range of civic and NGO actors. It tackles three sets of fundamental problems: data issues; visualisation/interaction issues; and analytics/modelling issues. Researcher: Dr Jeneen Naji.

> Council of Europe on Intercultural Education

Based on a commissioned study of their work since 1971, and a final report published in 2017, this project gave input to the Consultative Meeting of the Council of Europe on Intercultural Education in Budapest. Researcher: Dr Gavan Titley.



DEPARTMENT OF MUSIC

Following on from successes in previous years, the Music Department continues strengthening its position on the international academic platform, producing a series of outputs that reflect the broad engagement of academic staff with a range of research fields: composition, performance, music technology and musicology.

BOOKS

In 2018, Professor Byrne-Bodley co-edited a book in honour of Professor Harry White, a central figure in the increasing role and recognition that Musicology achieved in Ireland in the last twenty years. The book – *Music Preferred: Essays in Musicology, Cultural History and Analysis in Honour of Harry White* (Vienna: Hollitzer Verlag) – whose title recalls one of White's earliest publication, is an impressive collection of articles by contributors from all around the world, testimony to the role that Professor White has had in forging the musicological culture from Ireland onto the world. Dr Cascelli's monograph – *Schenker's Chopin. Files from the Oster Collection* (Libreria Musicale Italiana. Online Bibliometric through Amazon Sale suggests that on average 13/14 books a month are being sold, which is a very good figure for a music

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analysis book) – is the first comprehensive study of Schenker's unpublished analyses, from the Oster Collection at the New York Public Library, on the music of Chopin. Susanna Pasticci, in writing about the recent developments in the discipline of music analysis (in the *Rivista di Teoria e Analisi Musicale*) states that “by bringing together analytical rigour and a broad cultural vision, Cascelli proposes a new interpretation of the theoretical thought of Heinrich Schenker.” Dr Sofer co-edited a book on Elizabeth Maconchy, a British composer of the 20th century. The book is entitled *Elizabeth Maconchy. Music as Impassioned Argument* (Universal Edition). Ricordi writes that the “book provides insight into Maconchy's struggle in the beginning of her career in the male-dominated world of classical music, her musical connections to Béla Bartok and into her biography”.



Music preferred. Essays in musicology, cultural history and analysis in honour of Harry White

BOOK CHAPTERS

In 2018, researchers in the Department published six book chapters. Professor Lorraine Byrne-Bodley contributes to the reassessment of Franz Schubert's dramatic music in the book *Drama in the Music of Franz Schubert* (eds Joe Davies and James William Sobaskie, published by Boydell & Brewer) with a chapter titled: “Opera that Vanished. Goethe, Schubert and Claudine von Villa Bella.” Dr Scahill looks at the role of piano in the revival of Gaelic music in his contribution to the collection of articles dedicated to Professor White with a chapter on “‘That Vulgar Strummer’: The Piano and Traditional Music in the Gaelic Revival.” Professor Morris reflects on what it means to watch opera live at the cinema in his “The Deadness of Live Opera” in *Performing Arts in Transition. Moving between Media* (eds Maria Katharina Schmidt and Cornelia Schmitz, Routledge). Professor Palmer provides a rich analysis of the socio-economic context of the Liverpool Philharmonic Society's development in the mid-19th-century in her article “Cultural Demand and Supply in an Imperial Trading Centre: Developing the Liverpool Philharmonic Society Orchestra in the Mid-Nineteenth Century,” included in

Global Perspectives on Orchestras: Collective Creativity and Social Agency (New York: Oxford University Press). Dr Sofer contributes with a chapter to the book she co-edited on Elizabeth Maconchy: “Death Becomes Him: Elizabeth Maconchy's One-Act Opera *The Departure*.” Dr Anderson contributes to the recent development of the studying of John Williams's music both in terms of the dramaturgy and compositional skills with her chapter “Sounding an Irish Childhood: John Williams's Score for ‘Angela's Ashes’ in *John William: Music for Films, Television and the Concert Stage* (ed. E. Audissino, Brepols).

PEER REVIEWED ARTICLES

Researchers in the Department published nine peer-reviewed articles, all in top-levels journals.

Professor Lazzarini investigates the development of a series of techniques that can be applied to digital audio processing in the article “Live Convolution with Time-Varying Filters,” in *Applied Sciences*. In the article “Vers un Gradus ad Parnassum pour l'Informatique Musicale” Professor Lazzarini then explores the tools that are necessary to the computer musicians to help them navigating the symbiotic relationship between art and science in the field of computer music (*Revue francophone d'informatique musicale*).

Dr Placanica, as part of her research on the genesis and performance traditions of works composed for solo female singers, published two articles: in “The Unsung One: The Performer's Voice in Twentieth-Century Musical Monodrama,” (*Journal of Musicological Research*) she argues that “the performer's agency in musical monodrama, should be redefined as a compelling extra-text be asserted both theoretically and practically in the discourse and production surrounding twentieth-century monodrama and music theater stage works for one performer.” In the article “Recital I (for Cathy): A Drama ‘through’ the voice’ (Twentieth-Century Music) she explores the role that the performative voice of female soloists had in a series of twentieth-century compositions for solo female voice, raising questions about gender politics and the interconnected nature of the two phases of creation and performance.

Dr Watson reads Dukas's opera *Ariane et Barbe-Bleue* in the context of recent operatic video productions and as part of current discourses on sexual violence in “Fifty Shades of Bluebeard? Dukas's Ariane et Barbe-Bleue in the Twenty-First Century,” (*Twentieth-Century Music*). Dr Sofer explores the reorientation of norms of sexuality through the musical associations and conventions in Barry Truax's *Song of Songs (Organised Sound)* and aspects of censorship and interculturality in Alice Shields's electronic opera *Apocalypse (American Music)*. Dr Cascelli reconsiders the role of Euridice in the myth of Orpheus and in

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particular in Monteverdi's opera *L'Orfeo* in "L'Orfeo: Memory, Recollection, and the tragedy of Choosing between Seeing and Hearing (*Philomusica On-line*).

COMPOSITIONS

For Ryan Molloy, 2018 sees the premiere of *Dúchann*, a new work for piano and tape commissioned by the IMBOLC International Arts Festival, and *Ogham*, a new work commissioned by the Ulster Youth Orchestra to celebrate their 25th Anniversary Year. Other compositions include: *Loinnir Laoise*, *The Mountains of Pomeroy*, *Béal and Buaine na Gaoithe*. This last one is song cycle for voice, flute & Harp commissioned by Dr Placanica and supported by Arts Council Ireland, with specially commissioned texts from award-winning Irish poet Martin Dyar. The song cycle was premiered at Maynooth University by The Damsely Trio and subsequently brought on tour through Ireland in October 2018.

Iain McCurdy's *Found Sounds Lost* (for fl, cl, vcl, pno & fixed medium), commissioned through the Arts Council of Northern Ireland, was performed at the HRSE Season Launch at the Sonic Arts Centre in Queen's University, Belfast.

Martin O'Leary composed three pieces: *Diffusa est Gratia for SATB choir*, *Maeve's Air* (1994) arranged for Irish Harp and performed at a lunchtime concert in Maynooth by renowned Irish harpist Ann-Marie O'Farrell, and a Two-Part Invention for piano, performed by the composer at the John Field Room in the National Concert Hall.



Gordon Delap's "I dreamt that I died and came back as a moth trapped in a practice room piano" was performed at Contemporanea 2018 as a finalist of XII International composition competition Città di Udine; it is also included in the CD *Metamorphoses 2018* (a collection of the pieces presented in the final of the Dixième Concours de Composition Acoustmatique *Metamorphosen 2018*); *Ashes to Ashes* was presented at *Sound Forms*, Hong Kong.

MEDIA, RTÉ BRAINSTORM SERIES

Alison Hood, as a result of a collaborative teaching initiative with Business within a music module, co-wrote and published an article in the *Brainstorm Series* with the title "What could Bowie teach business about changes?"

GRANTS AND POST-DOCTORAL FELLOWSHIPS

During 2018 Dr Candida Mantica concluded her Irish Research Council Postdoctoral Fellowship (*Gaetano Donizetti's école-mosaïque*. Mentor Dr Cascelli). Dr Laura Anderson, entered the second year of her IRC project (*Disruptive Soundscapes: Music and Sound Design in French Post-War Cinema*. Mentor Professor Morris). Dr Anja Bunzel concluded her IRC fellowship (*Johanna Kinkel's Lieder Compositions as a Socio-Political and Cultural Mirror of Her Time*. Mentor Professor Byrne Bodley). Dr Victor Lazzarini was awarded two grants by Enterprise Ireland: one is a Commercial Bootcamp Pilot Support Grant, the other is for a 3D audio CFF. Dr Danielle Sofer has been awarded an AMS Keitel-Palisca Membership and Professional Development Travel Grant to attend the joint conference of the American Musicological Society and the Society for Music Theory, where she presented papers on the panel 'Diversity and Discipline in Hip-Hop Studies' and on research from her forthcoming book on sexuality and electronic music.

EVENTS HOSTED

- > January 2018, Join ICTM-IE/SMI Annual Postgraduate Conference.
- > 20 April 2018, The second annual symposium of the LGBTQ+ Music Study Groups, which included a keynote lecture by Liam Lillis Ó Laoire and a panel on, 'Music, LGBTQ+ Identities, Ethnicities and Nationalism in Ireland'.
- > Medieval and Renaissance Music Conference, July 2018, with c.200 scholars from all around the world. The conference received a support grant from Fáilte Ireland.
- > 30 November 2018: Self-Borrowing in Nineteenth-Century Italian Opera: A Reconsideration, Conference organised by the IRC Scholar Dr Mantica. The conference included a keynote talk by Professor Emanuele Senici (University La Sapienza, Rome) and invited panel (Professor Giorgio Sanguinetti from University of Tor Vergata, Rome; Professor Francesco Izzo, from University of Southampton, UK; Professor Roberta Montemorra Marvin, from University of Massachusetts Amherst).

As parts of the weekly seminars series, the Department hosted the following visiting speakers: Dr Seán Doherty (DCU), Professor Griff Rollefson (UCC), Dr Ann-Marie Hanlon (DKIT), Dr Méabh Ní Fhuartháin (NUI, Galway), Dr Denis Condon (MU), Dr Candida Mantica (MU), Dr Liz Doherty (University of Ulster), Sylvia O'Brien (RIAM), Dr Ian Sapiro (University of Leeds), David Fennessy (Royal Conservatoire of Scotland, UK), Dr Danielle Sofer (MU).

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OUTREACH AND ENGAGEMENTS

Dr Watson spoke on Arena, RTÉ Radio 1, introducing the Female Composers Concert Series (part of Sounding the Feminist/NCH project). Professor Byrne-Bodley gave the John Bird Lecture at the University of Cardiff (9 October 2018). Dr Cascelli was an invited speaker for a three-day seminar on Schenkerian Analysis at the Conservatoire of Trento (Italy) and was also invited at the Symposium on the Analysis of Verdi's Music at the Istituto di Studi Verdiani in Parma, to present a response to Professor Sanguinetti keynote presentation on the analysis of Giuseppe Verdi operatic music. Dr O'Leary gave a lunchtime concert of music by Irish composers (Seoirse Bodley, Paul Hayes, Kevin O'Connell, Rhona Clarke, John McLachlan and Peter Moran) in Maynooth University and at the National Concert Hall. Researchers delivered papers at conferences at the *Fifth Sibelius Academy Symposium in Music History in Helsinki*, at the *Oxford Conducting Institute International Conducting Study Conference*, ICTM Conference in Ireland, *Performance Studies Network* at the Norwegian Academy of Music in Oslo, Society for Music Theory Conference, *Metamorphoses Competitions*, *Contemporanea 2018*, SMC 2018, *Medieval and Renaissance Music Conference* in Maynooth University, *Baroque Music Conference* in Cremona, *Music and Ireland Research Symposium* in NUI Galway.

The Department continues the successful collaboration with Music Generation Offaly Westmeath for the University Orchestra Sinfonia.

OTHER EXTERNAL ENGAGEMENTS

- > Dr Cascelli, *Pre-performance talk for the First Irish Performance of Claudio Monteverdi's opera The return of Ulysses*, by Opera Collective Ireland.
- > Professor Byrne-Bodley, re-elected to a second term of office 2018 as President of the Society for Musicology Ireland.
- > Professor Morris, Editor of Opera Quarterly.
- > Dr Watson, reviewer for Journal of the Royal Musical Association, Cambridge Opera Journal, Journal of the Society for Musicology in Ireland, Popular Music.
- > Dr Watson: Education officer on Working Group for the project *Sounding the Feminists*.
- > Dr Watson: Co-curating the Creative Ireland funded NCH @STF Chamber Music Series (2018-23) as part of her role in Sounding the Feminists.

DEPARTMENT OF PHILOSOPHY

In 2018, the Department of Philosophy published another issue of its in-house journal, *Maynooth Philosophical Papers*. Beginning with this issue, which is the ninth, *Maynooth Philosophical Papers* will

be published in collaboration with the Philosophy Documentation Center of Charlottesville, Virginia. The PDC is one of the world's leading publishers of philosophy journals. The entire content of the journal, including all past issues, is henceforth available both in print and online.



Several members of the department contributed to the issue. Notably, it includes the inaugural lectures of the new Chair of Philosophy, Professor Philipp Rosemann, and of the first holder of the Thomas A. F. Kelly Visiting Chair, Professor William Desmond. In their respective lectures, Rosemann spoke on the philosophical dimension in the work of Leonard Cohen, while Desmond offered reflections on the way in which the experience of beauty opens up a path into metaphysics. The newly appointed Chair of Modern Irish, Professor Fionntán de Brún, published the English version of his inaugural lecture in the *Maynooth Philosophical Papers* as well—appropriately so, since de Brún approached the question of the revival of the Irish language from a distinctly philosophical perspective.

In addition, issue nine of *Maynooth Philosophical Papers* offers papers by Dr Cyril McDonnell and Dr Mette Lebeck (in collaboration with Dr James Smith), respectively on the Husserl-Heidegger debate regarding the meaning of phenomenology and on Edith Stein's philosophy of education. Professor Emeritus Jonathan Gorman, former Chair of Philosophy at Queen's University, Belfast, wrote a piece in the area in which he enjoys international renown, the philosophy of history.

Moving on to book publications, Professor Rosemann published *Charred Root of Meaning: Continuity, Transgression, and the Other in Christian Tradition*, an investigation of the importance of the element of rupture in the constitution and history of Western Christian thought. On the relationship between art and religion, Professor William Desmond authored *The Gift of Beauty and the Passion of Being: On the Threshold between the Aesthetic and the Religious*. The book extends Professor Desmond's influential

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metaphysics of the ‘between’ to the realm of aesthetics. Dr Amos Edelheit was responsible for a critical edition, with English translation, commentary, and introduction, of Giovanni Carli’s (1428–1503) *Book of My Days in Lucca (Liber dierum lucensium)*. Writing at a time of crisis and transition, Carli reflects on the reform of the Dominican order, combining in his work elements of scholastic and humanistic learning.

Among article-length publications, it is worth highlighting Professor Rosemann’s long entry on the twelfth-century theologian Peter Lombard for the *Dictionnaire d’histoire et de géographie ecclésiastiques*; the piece was written as an account of the current state of knowledge on this important figure. Professor Michael Dunne, continuing his research on the Irish philosophical heritage—particularly in the medieval period—published ‘Aristotle’s Natural Philosophy in the Writings of Peter of Ireland’. Dr Susan Gottlöber contributed two chapters, on Edith Stein and Simone Weil, to a critically-acclaimed German handbook on the philosophy of religion, *Religionsphilosophie und Religionskritik. Ein Handbuch*. Dr Mette Lebech authored ‘A Steinian discussion of Joseph Ratzinger’s reflections on the problems faced by Europe today’ for a topical volume devoted to Europe and Its Identity in the thought of Edith Stein.



Professor Philipp W. Rosemann

In 2018, the staff of the Philosophy Department were once again active in contributing to major international conferences. Professor Rosemann delivered the keynote address at the Boston Colloquy in Historical Theology, offering a brief account of his new book, *Charred Root of Meaning*.

Dr Amos Edelheit appeared at no fewer than four conferences:

1. Lecture at the international conference on *La filosofia di Giovanni Pico. Tra fonti e fortuna. Nuove prospettive storiografiche*, held at the Istituto Nazionale di Studi sul Rinascimento, Palazzo Strozzi, Florence. Title: ‘Pico and the Scholastics: Formation, Traces, Reception’.

2. Lecture at the Sixty-Fourth Annual Meeting of the Renaissance Society of America, New Orleans. Title: ‘Pico and the “Parisian Style”’: Paris in the 1480s’.
3. Lecture at the International Symposium on Plato, his Dialogues and Legacy, held at Bar Ilan University (Israel). Title: ‘The Case of Plato’s *Charmides* in the Fifteenth Century: Ficino, Poliziano, and a Lesson from Bruni. Preliminary Notes’.
4. Lecture at the departmental seminar of the Department of Classics, Tel-Aviv University. Title: ‘Classical Scholarship and Philosophy in the Italian Renaissance’.

Dr Edelheit’s new book, mentioned above, was launched at Santa Maria Novella, Florence, by Professor Franco Bacchelli, Professor Marco Forlivesi, and Father Luciano Cinelli O.P.

Dr Susan Gottlöber delivered lectures at three conferences, both in Ireland and abroad:

1. Lecture at the conference ‘Aliter infinitum—anderswie unendlich’ at the University of Erfurt (Germany). Title: ‘Nikolaus von Kues als Gegenstand verfolgter jüdischer Forschung bei Martin Buber’.
2. Lecture at the conference of the North American Society of Early Phenomenology on ‘Time, Memory, and Eternity’ (Pittsburgh). Title: ‘Time, Aging, and Death in the Thought of Max Scheler’.
3. Invited Speaker at the Annual Conference of the Irish Philosophical Society at UCD. Title: ‘Toleration and Hospitality’.

Dr Mette Lebech, too, contributed to several academic gatherings, including a workshop she herself organized:

1. Lecture at the Research Seminar on Phenomenological Metaphysics, University of Würzburg. Title: ‘Sinn des Seins. Die Metaphysik Edith Steins’.
2. Contribution to a Panel Discussion on the Eighth Amendment, DCU Philosophical Club, DCU. Title: ‘Human Dignity’.
3. Organization of a two-day research seminar at Maynooth University on Stein’s *The Structure of the Human Person*. Lecture: ‘The Problem of the Origin of the Species—Species, Genus, Individual’.

Finally, Dr Cyril McDonnell travelled to Bucharest, where he was invited to present a paper at the International Conference ‘Brentano—Comte—Mill. The Idea of Philosophy and Psychology as Science’, organized by the University of Bucharest. Dr McDonnell spoke on ‘Scientific and Unscientific Methods in Empirical Psychology: Brentano’s Dispute and Critique of Comte, Mill, and Maudsley’s Accounts of Inner Perception’.

In sum, the Maynooth University Department of Philosophy has a remarkable presence in the international research community.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF BIOLOGY

PUBLICATIONS HIGHLIGHTS

Research groups in the Department of Biology have published a total of 79 publications in the year, 55 of which were in peer-reviewed journals (research articles and reviews). Most of these publications were in peer-reviewed journals that are very well considered and respected in their fields of research (impact factors between 3 and 10; e.g. *Infection and Immunity*; *Journal of Immunology*; *New Phytologist*; *Genome Biology and Evolution*; *Scientific Reports*), with at least 3 publications in high-impact factor (>10) journals (*Nature Communications*; *Nature Immunology*; *Nucleic Acids Research*).

FUNDING HIGHLIGHTS



Dr Eoin McNamee

- > Dr Eoin McNamee; SFI Future Research Leaders Award; MicroRNA Control of Mucosal Inflammation; €1,207,251.
- > Dr Joanne Masterson: SFI Future Research Leaders Award; Transcriptional Mechanisms Controlling Epithelial Cell Fate Determination during Allergic Esophageal Inflammation in Eosinophilic Esophagitis; €1,572,600.
- > Dr Andrew Hogan; National Children's Research Centre Crumlin; Childhood Obesity and Vaccine Responses; €234,459.
- > Dr Mark Robinson; Health Research Board; The liver neighbourhood watch: regulatory tissue-resident natural killer (NK) cells protect against liver decompensation in patients with chronic liver disease; €475,969.
- > 4 postgraduate scholarships: 2 Irish Research Council, 1 Walsh fellowship, 1 Environmental Protection Agency (the last of these co-financed by The Kathleen Lonsdale Institute for Human Health Research).

PRIZES

- > Dr Karen English was awarded the IRC Early Career Researcher of the year award in December 2018.
- > Professor Paul Moynagh was elected to the Royal Irish Academy.

SUMMARY OF EXTERNAL ENGAGED RESEARCH

Several researchers have been involved in consultancy projects including public institutions and companies such as Teagasc (R. Owens) and an SME biotech in California (J. Masterson).

In addition, contributions towards public policy include activities by Dr Fiona Walsh in relation to antimicrobial resistance (EPA and the European Centre for Disease Control DG-Sante). The Department also contributes to international organizations. For example, Dr Fiona Walsh contributes to the Expert committee on AMR in Food, crops and the environment, Food and Agriculture Organization (FAO) of the United Nations.

Members of the Biology Department engage in a large number of collaborations both nationally (e.g. with TCD and UCD) and internationally (e.g. other universities in Europe (Imperial College London, University of Natural Resources and Life Sciences in Austria, INRA in France, Leibniz Institute in Germany) or with institutions in the U.S. (e.g. Denver & Children's Hospital Colorado) and in Canada (McMaster University in Hamilton, Canada) as well as collaborative projects with industry (Nektr Technologies (J. Carolan), Clarins (K. Kavanagh), and Alltech (F. Walsh). The dynamic network established by members of the Biology Department is also visible in the authorships of many of the articles published in 2018.

CONTRIBUTIONS TOWARDS PUBLIC POLICY

The EU performed an audit of the activities of the Irish government bodies in relation to antimicrobial resistance. F. Walsh was invited by the EPA to present her research findings and discuss these with the European Centre for Disease Control DG-Sante.

F. Walsh is also a member of the Expert committee on AMR in Food, crops and the environment, Food and Agriculture Organization (FAO) of the United Nations. The report of the meeting held on the role of crops, biocides and the environment in food borne AMR was published this year (Expert committee member on AMR in Food, crops and the environment, Food and Agriculture Organization (FAO) of the United Nations).

DEPARTMENT OF CHEMISTRY

2018-2019 was another strong year for the Chemistry Department in terms of research. 30 research articles (recorded in Scopus) were published by 12.5 FTE academic staff in 2018, with an average of 2.4 papers per academic. In 2018, 20% of Chemistry Department research articles are in the 10% most cited worldwide, with 37% of articles in the top 10% of journals. The department continues to have a strong international profile, with 51.2% of articles (2016-2018) published with international co-authors. 7% of publications include an industry co-author.

FACULTY HIGHLIGHTS

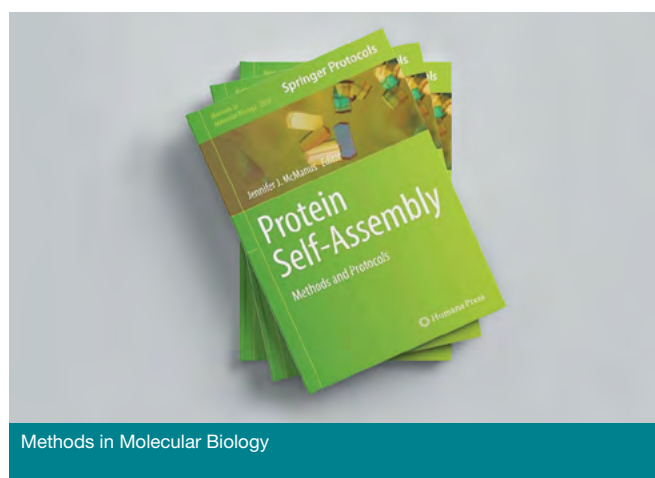
FACULTY OF SCIENCE AND ENGINEERING

The department continues to be highly interdisciplinary, with only 37% of research articles in chemistry-specific journals with significant contributions to journals at the interface of Physics, Chemical Engineering, Material Science and Biochemistry making up an additional 39% of publication activity.

Several recent publications have been highlighted as “Most Cited” for the Department (source: SciVal in 2018) and include:

1. The physics of protein self-assembly. McManus, J.J., Charbonneau, P., Zaccarelli, E., Asherie, N. (2016) *Current Opinion in Colloid and Interface Science*, 22, pp. 73-79. (63 citations).
2. Creatinine and urea biosensors based on a novel ammonium ion-selective copper-polyaniline nano-composite. Zhybak, M., Beni, V., Vagin, M.Y., Dempsey, E., Turner A. P. F., Korpan, Y. (2016) *Biosensors and Bioelectronics*, 77, pp. 505-511 (42 citations).
3. Macrocyclic squaramides: Anion receptors with high sulfate binding affinity and selectivity in aqueous media. Qin, L., Hartley, A., Turner, P., Elmes, R. B. P., Jolliffe, K. A. (2016) *Chemical Science*, 7 (7), pp. 4563-4572. (38 citations).
4. Bioreductive fluorescent imaging agents: Applications to tumour hypoxia. Elmes, R.B.P. (2016) *Chemical Communications*, 52 (58), pp. 8935-8956. (36 citations).
5. Coordinated Acetylcholine Release in Prefrontal Cortex and Hippocampus Is Associated with Arousal and Reward on Distinct Timescales. Teles-Grilo Ruivo, L.M., Baker, K.L., Conway, M.W., Kinsley, P. J., Gilmour G., Phillips K. G., Isaac J. T. R., Lowry, J. P., Mellor, J. R. (2017) *Cell Reports*, 18 (4), pp. 905-917. (25 citations).

In July 2019, Dr Jennifer McManus published an Edited Volume of *Methods in Molecular Biology* series, published by Springer on the topic of Protein Self-Assembly, with chapters contributed by researchers in Ireland, the UK, US and Italy.



A number of prestigious research grants were awarded in 2018/2019, including an Irish Research Council postdoctoral award

to Lokesh Kumawat working with Dr Robert Elmes and an IRC Ulysses grant to Dr John Stephens to work with collaborators in France. Ongoing grants include an SFI PI award to Professor John Lowry and a US National Institutes of Health grant to Professor Lowry in collaboration with Professor Colm Cunningham at TCD.

A number of engaged research projects started/continued in 2018/2019, including an Innovation Partnership between Dr John Stephens and Dairygold (in collaboration with Dr Andrew Hogan, Department of Biology), a collaboration with Medimmune (Astra Zeneca) UK with Dr Jennifer McManus as part of the MU co-fund programme. In addition, a research contract was fully funded by the Stevanato Group (Italy) working with Jennifer McManus, which has recently resulted in an IP assignment.

In addition, Aoife Harbison, as postgraduate student working with Dr Elisa Fadda received funds from the Royal Society of Chemistry to spend time as a visiting researcher in Canada.

Researchers from the department delivered a number of important talks and seminars in 2018/2019 including:

- > Dr Diego Montagner who was an invited speaker at the ASBIC (Asian Biological Inorganic Chemistry Conference) in December 2018, delivered Invited Seminars at the Technological University of Dortmund, Germany in March 2019 and at the “Centro Atómico de Bariloche” in Argentina in July 2019.
- > Dr Eithne Dempsey was a Plenary Speaker at the MADICA 2018 meeting in Tunisia in November 2018.
- > Dr Jennifer McManus delivered invited seminars at the Cavendish Laboratory in Cambridge University in November 2018 and at the Department of Chemical Engineering at the University of Delaware in April 2019. In addition Dr McManus was a Keynote speaker at the Biopharmchem/Pharmachem Skillnet Research Showcase in Dublin in April 2019.

ENGAGED RESEARCH

> Consultancy reports

- Dr Jennifer McManus produced two consultancy/technical reports for the Stevanto Group as part of a wholly funded research project.

> Enterprise partnerships

- Dr John Stephens was funded by Enterprise Ireland for a Commercial Case Feasibility Grant for a “Food additive database”.
- Dr John Stephens has an Enterprise Ireland Innovation partnership with Dairygold on “Novel approach to the development of food products for pre-diabetics and those with impaired glucose tolerance (IGT)”.
- Dr Jennifer McManus has a co-funded project with Medimmune (Astra Zeneca) UK on “The biophysics of peptide and protein assembly”.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

- Dr Jennifer McManus had a fully industry funded grant from the Stevanato Group about “Proteins on Surfaces” which resulted in 2 consultancy/technical reports and an IP assignment”.

The chemistry department is now providing several analytical services to industry and academic users. Technical staff member Barbara Woods has established a Whiskey Analysis service and has performed analysis for several distilleries in Ireland. Walter Walsh is providing microanalysis services for TCD chemistry and UCD chemistry. All services are providing income that can be used to support instrumentation maintenance.

In summary, the department continues to deliver high quality research, published in highly respected journals, cited at a level consistent with (or above) international norms in the field and with a high proportion of our articles co-authored with international research groups. An increasing number of engaged research projects are being established, either wholly industry funded or co-funded by MU/Enterprise Ireland/IRC. In 2019, two researchers in the department became funded investigators in SSPC, the SFI centre for pharmaceuticals research (Dr Robert Elmes and Dr Jennifer McManus). Two PhD studentships will initially be funded as platform projects within the centre, with potential for significant additional funding through industry partnership and/or SFI Spoke projects and this represents an important development for the Department. The researchers that have been trained in the department continue to excel after graduation with many taking up senior researcher positions in industry and many pursuing postdoctoral research at prestigious institutions (Yale, Caltech, Helmholtz Institute), which is a significant indicator of the quality of research performed in the department.

DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science comprises 23.5 staff and recent growth saw 9 new PhD students begin their studies in 18/19 and 3 PhDs graduated. The department offer a wide range of postgraduate courses in computer science, software engineering, multimedia and mobile systems. Research expertise in the department is diverse spanning areas such as machine vision, cognitive modelling, programming, geospatial data analysis, computational information theory, music technology, formal methods for software engineering, and information retrieval.

Stephen Brown’s PhD student, Joe Finnegan, funded by the SFI Research Centre for Future Networks and Communications (CONNECT) at Maynooth University, is undertaking a collaborative internship at the Universitat Oberta de Catalunya (UOC) in Barcelona for 3 months in early 2020. He will be working in the Wireless Networks Research Group (WINE) which is part of the Internet Interdisciplinary Institute (IN3) at the university. He will be closely working with members of the team there on research related to his PhD - looking at performance enhancements to wireless

networking protocols. We expect that this visit will also lead to further collaboration activities with the group.

Joe Timoney & Tom Lysaght in the Music Technology Research Group had a number of activities this year. They will have 2 new PhD students in the Music Tech. field joining in the following academic year, one funded under Women in Stem and another has a HUME scholarship. Both students will be working in the area of IoT. Additionally, the group are working with two Digital Humanities PhD students in the fields of internet archiving and computational literary theory. The group had two visiting professors from Brazil that were funded under the Erasmus Mundus scholars program in DEPEND, Leandro Costalonga and Ricardo Ckestr. Dr Costalonga gave a number of talks on HCI for Music Technology and Dr Ckestr gave a number of talks on Stochastic Automata Networks in Distributed Programming. There were a number of conference presentations during the year including the Digital Libraries for Musicology (DLfM) 2018 held in Paris. Additionally, Joe Timoney became the Vice Chair of the newly inaugurated Irish section of the Audio Engineering Society. They organised a meeting and talk held at MU on May 14th 2018. The group was also a part of a COST Action application ‘Digital Cultures in Europe through Web Archives’ – DIGICULTES.

Dr Tim McCarthy was awarded a grant of €2.5M in collaboration with industry for the U-FLYTE Drone innovation platform. Tim McCarthy represented the Department at the Maynooth University and Intel Ireland signing of a Memorandum of Understanding to create a strategic research and innovation partnership. Other research awards for Tim McCarthy include;

- Co-PI on a 4-year (€380k) H2020 Earth Observation Climate Change project (MACOBioS).
- Co-PI on EPA project SoMoSAT (€325k) Earth Observation Land Cover Mapping with Rowan Fealy (Geography/ICARUS).
- PI of Copernicus Academy/Relay coordination funded activities (€170k) here at Maynooth.



Dr Tim McCarthy, Maynooth University with Minister for Business, Enterprise and Innovation, Heather Humphreys T.D, and Dr Ciarán Seoighe SFI Deputy Director General.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

Dr McCarthy is collaborating with Dr John McDonald and together with partners drawn from NUI Galway, UCC and IOT Tralee as well as Industry, he led the successful bid for (€1.1m) SFI Research Infrastructure National Autonomous Technologies Data Platform (NATDaP) project, with €514k assigned to McCarthy/McDonald's team at MU.

Dr McCarthy and Dr McDonald are also collaborating in the SFI Irish Software Research Centre LERO's Blended Autonomous Vehicles (BAV) initiative (launched successfully in Oct 2019). McCarthy/McDonald have two projects planned, with the first project, HD Maps (€165k), in partnership with PMS underway.

Dr McCarthy was invited Keynote at 3 X drone Conferences (Dublin, London and Amsterdam), contributed to the Government's National Space Strategy 2019 – 2025, panel research member for drafting guidelines; Testing of Autonomous Vehicles in Ireland, participated in 10 X Radio, Newspaper, & Online outreach items in 2019. He continues to represent Ireland at European Commission's Copernicus (Earth Observation) Committee in Brussels on a monthly basis.

Dr John McDonald's research group was awarded a grant of €226K to fund a 4-year collaboration with Valeo, a world-leading global automotive supplier. The project is funded through Dr McDonald's participation in the Lero Irish Software Research Centre and will support two PhD students in the development of techniques for long-term autonomy for self-driving vehicles.

Other achievements and engagements of note during this period include:

- > Dr McDonald became an Associate Editor of IEEE Robotics and Automation Letters. He took up the role of Student co-Chair for the European Signal Processing Conference (EUSIPCO) 2021.
- > Dr McDonald's PhD Student, Louis Gallagher won the Best Oral Paper Award at the Irish Machine Vision and Image Processing Conference (IMVIP) 2018.

This year saw a significant enhancement in the robotics infrastructure in the department with the delivery of a Rethink Sawyer Collaborative Robot and a PAL Tiago Mobile Manipulator Robot, both providing state-of-the-art research platforms for robotics research. Both of these platforms have been funded under an award of ~€177K to Dr McDonald and Dr Rudi Villing (EEng) through the SFI Infrastructure Programme.

Peter Mooney had a number of publications, public presentations, external engagements and hosted conferences. Since July 2019 he is an Editor of Transactions in GIS with responsibility for editorial duties in Europe, Africa and Middle East, reviewer for the EU COST Association Brussels and Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) (2019).

He gave an invited seminar lecture "What are the problems in Crowdsourced Geographic Information?" at The Bartlett Centre for Advanced Spatial Analysis (CASA), University College London, March 6th 2019. Also in June 2019 he was a lecturer and trainer in Citizen Science Training School on the topic of Quality Control of OpenStreetMap. This was held in Coimbra, Portugal, June 2019.

He organised a number of workshops and conferences being:

- > Co-Organiser of GeoCultGIS 2019, Geographical and Cultural Aspects of Geo-information: Issues and Solutions Workshop at AGILE 2019 and
- > Co-Chair and Organiser with his colleague Dr Liadh Kelly of the 1st National Workshop on Smart Farming and Data Analytics in Ireland (SFDAI) 2019 in Maynooth University, June 12th 2019.
- > Chair and Organiser for OSGeoIE 2019, 3rd Irish OSGeo Symposium, Cork City, May 2019.
- > Lastly he has been involved in a number of publicity engagements:
 - National Rural Network for Ireland (NRN) How do we Transition to Smart Farming in Ireland? April 2019.
 - Is smart farming a sign of things to come for Irish farmers? RTÉ Brainstorm Voxpop Video.
 - RTÉ Brainstorm Podcast: The future of farming in Ireland (with studio interview), July 2019.



Thomas Naughton's group's 2018 journal article "Space-variant video compression and processing in digital holographic microscopy sensor networks with application to potable water monitoring" (DOI: 10.1364/AO.57.00E190) was awarded the "Editor's pick" by the journal Applied Optics (publisher OSA - The Optical Society) on 1st August 2018. According to the journal, this serves to highlight articles with excellent scientific quality which are representative of the work taking place in a specific field.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

Thomas Naughton, John McDonald, and postgrads Tomi Pitkäaho and Taina Lehtimäki participated in an international image analysis competition called the "HER2 Scoring Contest". In this international competition (warwick.ac.uk/fac/sci/dcs/research/tia/her2contest), the team's deep learning algorithms were up against those from such prestigious institutions as University of Oxford, Carnegie Mellon University, and IIT Guwahati. The results are publicly available at: (warwick.ac.uk/fac/sci/dcs/research/tia/her2contest/outcome). Our three submitted algorithms were ranked 2, 3 and 4 in the points leaderboard. The results were published in the journal *Histopathology* in 2018.

Professor Barak Pearlmutter had a number of engagements as an invited speaker. These included:

- > Keynote Speaker, Irish Conference on AI and Cognitive Science (AICS), 2019.
- > Invited speaker, Languages for Inference (LAFI 2019) Workshop, Lisbon, 2019.
- > Invited speaker, Mathematical Foundations of Program Semantics(MFPS), Halifax, 2018.
- > Invited seminar speaker, Vector Institute, University Toronto, 2018.
- > Invited seminar speaker, Microsoft Research, Seattle, 2018.



Professor Damien Woods, Hamilton Institute, Maynooth University

Professor Damien Woods had a prestigious publication in *Nature* in March 2019:

Damien Woods*, David Doty*, Cameron Myhrvold, Joy Hui, Felix Zhou, Peng Yin, Erik Winfree. Diverse and robust molecular algorithms using reprogrammable DNA self-assembly. *Nature* 567:366-372. 2019.

He was awarded two grants (~4M euro):

- > ERC award Active DNA: Computationally Active DNA Nanostructures commenced 1 Nov 2018. €3,297,581.
- > SFI ERC support award commenced 1 Nov 2018. €656,500.

Also, Professor Matthew Patitz from the University of Arkansas visited the group for a 6-month sabbatical (Aug-Dec 2019).

Dr Hao Wu had a number of conference committee responsibilities:

- > Program Committee: Formal Methods for Autonomous Systems 2019 (FMAS) under Formal Methods (FM) Symposium Conference.
- > Program Committee/Organiser: Object Constraint Language Workshop (OCL) 2019 under ACM Model Driven Engineering Languages and Systems (MODELS).
- > Program Committee: Model-Driven Engineering and Software Development (MODELSWARD) 2019 Conference.
- > He also became involved in a new collaboration with Professor Markus Helfort of IVI on smart city architectures and verification.

ENGAGED RESEARCH

The most active departmental member for this type of work is Dr Tim McCarthy. He is based in the National Centre for Geocomputation (NCG). The Music Technology Research Group was involved in an innovation voucher for Key Genomics LTD.

The Programming, Algorithms and Computational Thinking (PACT) group in the Department (Aidan Mooney, Rosemary Monahan, Thomas Naughton, Kevin Casey, Taina Lehtimäki, Joseph Duffin, Liadh Kelly) are working on externally engaged research to support primary and secondary teachers to introduce computational thinking into (and enhance STEM generally) in their classrooms. Research is conducted into the open problem of how best to teach computer science at primary level. This €370k -budget project (InSPECT) is partially funded through the Science Foundation Ireland Discover Programme with a €273k grant.

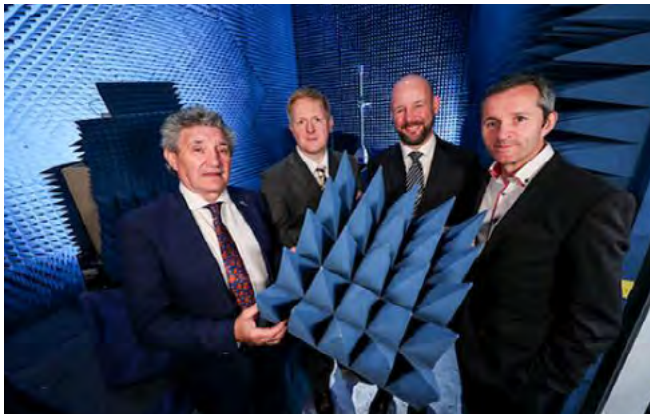
Thomas Naughton's group's multi-year research project on "Three-dimensional microbiological imaging, automated analysis, and display using digital holography" runs until 2020 and has received a contribution from Science Foundation Ireland of €500k.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF ELECTRONIC ENGINEERING

The Department of Electronic Engineering comprised ten academic staff in 2018/19. Members published 28 journal papers, and a further 26 peer reviewed conference papers.



John Halligan TD, Minister of State for Training, Skills, Innovation, Research and Development; Professor Ronan Farrell, Director of RadioSpace; Professor Philip Nolan, President of Maynooth University and Ciarán Seoighe, Deputy Director General, SFI

In 2019 the Department opened 'RadioSpace' Ireland's national 5G communications test centre, a €1.5 million facility with investment of €638,000 from Science Foundation Ireland. This reflects Professor Ronan Farrell's strong involvement with CONNECT, SFI's Research Centre for Future Networks and Communications. A first of its kind in Europe the facility consists of a specially constructed anechoic chamber with advanced test equipment for interference-free testing. The centre is open to large industry, SMEs and academic institutions internationally.

The department was successful in securing a prestigious Marie Skłodowska-Curie individual Fellowship for Dr Bingyong Guo who will carry out research under the mentorship of Professor John Ringwood in control parametric resonance of wave energy conversion systems. Professor Ringwood was also awarded the 2019 Maynooth University PhD Supervisory Award, which reflects contributions to supervisory excellence across the University.

Robotics infrastructure in the University was significantly strengthened by an award of €177K to Dr Rudi Villing and Dr John McDonald (Computer Science) through the SFI Infrastructure Programme.

Seven grants, totaling €461,696, were awarded to four investigators. Three academic staff are also currently involved in two SFI national centres both of which were renewed for a second cycle. Professor John Ringwood is a PI in MAREi, the SFI centre for ocean and renewable energy, and Professor Ronan Farrell is a PI

and Dr John Dooley is a funded investigator in CONNECT, the SFI telecommunications research centre.

In academic year 2018/19, there was a strong pipeline of research student graduations, with 4 PhD students graduating.

DEPARTMENT OF EXPERIMENTAL PHYSICS

TERAHERTZ SPACE OPTICS (PI: PROFESSOR J.A. MURPHY, DR C. O'SULLIVAN, DR N. TRAPPE, DR M. GRADZIEL) EUROPEAN SPACE AGENCY RESEARCH

2019 saw the close of a three-year *European Space Agency (ESA)* research contract entitled "Next Generation Sub-Millimetre Wave Focal Plane Array Coupling Concepts" (PI Dr N. Trappe). This Technical Research Contract was a large European collaboration that included groups from Cardiff University, Manchester University, APC Paris Diderot University, Chalmers Technical University and La Sapienza Rome. As part of this research, a number of prototype detectors were developed for future Cosmic Microwave Background (CMB) polarization measurement missions. These detectors are capable of measuring two or three frequency channels rather than the traditional single frequency channel. The consortium successfully manufactured a number of different focal plane geometries and measured, at cryogenic temperatures, the optical performance of a flat metamaterial lens and planar antenna-coupled bolometer detectors. A series of successful measurements were completed illustrating dual frequency operation in W Band frequencies (75-110GHz) with initial tests also carried out at 10GHz to work on manufacturing issues. In parallel, at the APC in Paris, an alternative focal plane architecture was also investigated, manufactured and tested using a polarization sensitive dual-band pixel at 140 and 160 GHz with a microstrip-excited slot antenna and two open-stub band-pass filters to direct the signal toward two LEKIDs. This technology is also compatible with flat lens beamforming and demonstrates the flexibility of the technology options explored and their potential application to future ESA CMB missions.

IRISH THZ MEASUREMENT FACILITY IN MAYNOOTH

A highlight for the group was the delivery, in November 2018, of the new Rohde and Schwarz frequency extension heads for our high-frequency vector-network-analyser based terahertz test facility. The system is now capable of transmitting and receiving signals between 0.5 to 1.1 THz, and is the first such facility to be developed in Ireland. The facility was funded as part of an SFI Infrastructure Award 2016 and is currently being commissioned by Drs Trappe and Gradziel. The goal of this national infrastructure is the development of antennas and optical systems for terahertz communications systems.

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

THE Q&U BOLOMETRIC INTERFEROMETER FOR COSMOLOGY (QUBIC)

QUBIC is a ground-based experiment that aims to measure the extremely faint polarisation features of the Cosmic Microwave Background (Maynooth PI, Dr C. O'Sullivan). It is based on the concept of bolometric interferometry and combines the sensitivity of Transition Edge Sensor bolometric detectors with the control of systematic effects offered by an interferometric design. QUBIC will operate from the ground in Argentina, at the Alto Chorrillos site near San Antonio de los Cobres, in the Salta province. Members of the Department of Experimental Physics have played a leading role in the design of the QUBIC optics in particular and continue to be key members of the consortium in the calibration and observing phases. The construction of a QUBIC technical demonstrator was completed in 2018 and integrated at a collaborating laboratory (Astroparticule et Cosmologie (APC) Université Paris Diderot) in Paris. The instrument cryostat was cooled for the first time in November 2018 and the detectors reached their target operating temperature of 300mK. Calibration tests were started in December 2018 (a PhD student from Maynooth travelled to Paris to take part in the calibration campaign) and the instrument detected photons for the first time later that month. A major milestone for the project was the demonstration, for the first time, of the technique of bolometric interferometry. In 2019 our collaborators in Argentina completed construction of the QUBIC laboratory and we plan to ship the instrument to begin its first sky observations in 2020.

The THz Space Optics Group was awarded Maynooth University's Faculty of Science and Engineering Research Award and also the overall University Research Achievement Award in 2019. These awards recognise outstanding contributions by staff, in this case to high-profile space and ground-based astronomical missions. Each group member has been PI on individual research grants as well as collaborators on joint awards. In particular, the highly-cited research publications arising from ESA's Planck satellite mission (Maynooth PI: Professor J.A. Murphy) were highlighted.



The THz Space Optics Group was awarded overall University Research Achievement Award in 2019

ATMOSPHERIC PHYSICS (PI DR F. MULLIGAN)

Highlights for Atmospheric Physics Group (PI Dr Frank Mulligan) included a visit by Dr Natalie Kaifler of the German Aerospace Center, Institute of Atmospheric Physics, Munich, and the conferring of a PhD on group member S. Rourke in November 2018. One aim of the research group is to develop an improved understanding of the diurnal and seasonal variations of the OH* emission as a function of latitude and local time and PhD student J. Kealy presented her work on ground-based observations of a pure acoustic wave in OH* airglow emissions at mesopause altitudes at a workshop in Grainau, Germany. A paper was also published in collaboration with Dr P. Mooney on the performance of a coupled WRF-ROMS model for regional climate modelling of hurricanes. Dr F. Mulligan was a referee for the journals *Atmospheric Measurement Techniques* and *Atmospheric Chemistry and Physics*.

MOLECULAR PHYSICS GROUP (PI DR P. VAN DER BURGT)

A new data acquisition system for electron-impact time-of-flight mass spectrometry was set up by the group this year, in which a field programmable gate array is used for the timing and the recording of mass spectra on an event-by-event basis (in collaboration with Dr M. Gradziel). Fragmentation studies of anthracene have shown clear evidence for double ionization above 21 eV electron impact, which provides the motivation to look for the coincident production of two singly-ionized fragments. The first results for coincidence mass spectrometry of anthracene were presented at an international conference. Plans are to look at fragmentations of other molecules in the near future. A collaboration with Dr Sam Eden (Open University, Milton Keynes, UK) on fragmentation studies of nucleobases led to a joint publication. Dr Peter van der Burgt is a member of the management committee of COST Action CA18212: Molecular Dynamics in the GAS Phase (2019 - 2023).

STAR AND PLANET FORMATION GROUP (PI: DR E. WHELAN)

The star and planet formation group continued to work on two main projects in 2018. The first was to understand the launching of protostellar jets (PhD students A. Murphy, A. Miller). The second was to explore techniques for detecting exoplanets in the disks of young stars (MSc student E. Cahill). Two papers were published relevant to this work in 2018.

Aisling Murphy continued her work on European Southern Observatory VLT/MUSE observations of the protostellar jet from the young star TH28. She was working with Dr Catherine Dougados of the Institut de Planetologie et d'Astrophysique de Grenoble (IPAG) thanks to ULYSSES funding awarded to the group in 2017. There she began work on using a deconvolution routine to better resolve the MUSE images of Th28, and determined with Dr Dougados that this was a promising method for resolving the inner structure of the jet. Aisling presented her work in the form of a poster at the Institute of Physics meeting "Sensing the Universe" in Limerick in

FACULTY HIGHLIGHTS

FACULTY OF SCIENCE AND ENGINEERING

May 2018 and in the form of a talk in June 2018 at a workshop on protoplanetary disks organised by the JEDI (Jets and Disks at INAF) consortium at the Rome Observatory. Aisling attended the NEON observing school 2018 which took place at the Asiago Observatory in Northern Italy. Eoin Cahill completed his MSc work in 2018 and Andrew Miller joined the group in October 2018 on a John Hume scholarship.

Dr Whelan continued working on several projects related to star and planet formation. Specifically she worked infrared imaging of brown dwarf jets, MUSE observations of protostellar jets and a spectro-astrometric study aimed at understanding the action of winds in young stars. She published two papers in 2018. This work is being carried out in collaboration with astronomers at The Lunar and Planetary Laboratory at the University of Arizona, The Centro de Astrobiología in Madrid, the Institut de Planetologie et d'Astrophysique de Grenoble, The Hamburger Sternwarte in Hamburg Germany and University College Dublin. During this period Dr Whelan was a collaborator on 5 successful ESO/VLT proposals for the instruments SPHERE, UVES, and SINFONI and on one successful APEX proposal. The time allocated totalled over 50 hours of observing time. Dr Whelan served on the ESO Observing Programmes Committee in 2018 and worked on two semesters of observing proposals. She also continued her work with the Astronomical Science Group of Ireland. The major success of 2018 was the ratification of Ireland's membership of the European Southern Observatory which occurred in September 2018.

FLUID DYNAMICS GROUP (PI DR M. CAWLEY)

The main focus of the research in the Fluid Dynamics Group continued to be on the behaviour of water and aqueous solutions in the vicinity of the density anomaly (close to 4°C at standard atmospheric pressure). Recent tests have focused on using the adiabatic lapse rate (isentropic change in temperature for a known pressure shift) to detect the presence of the density anomaly; this approach can be applied to a body of fluid which is at a uniform temperature throughout. Work is ongoing to counteract the effects of the lapse rate associated with the material constituting the temperature sensor, as this can mask the expected zero-crossing of the water lapse rate as it passes through the region of the density anomaly.

DEPARTMENT OF MATHEMATICS AND STATISTICS

The Department of Mathematics and Statistics has a strong research community of 17 academics with research groups working in the areas of Algebra and Number Theory, Geometric Analysis, Mathematics Education and Statistics. Members of the Department of Mathematics and statistics published 50 peer-reviewed journal and 22 conference publications in 2018, and 2 PhD students graduated in 2018/19.

The department staff secured four external research awards totalling €149,794 which included an SFI Discover Programme Award 'The Irish Mathematical Trust – Integration of mathematics Outreach' which is targeted at young people aged 9-18, and will provide a complex, integrated system of activities to nurture interest and enthusiasm for mathematics. The department has over 31 years of engagement with secondary schools and in collaboration with 5 other academic institutions are proposing two national-level initiatives, Maths Circles and Junior Maths Enrichment with a third tier intended to engage the general public with the creative part of mathematics.

DEPARTMENT OF PSYCHOLOGY

The Department of Psychology is a highly research active department, with a strong record of research publication and other outputs. Research is central to everything the department does. In the calendar year 2018, there were 82 peer reviewed international journal articles published by members of the department, a remarkable rate of research productivity for what is still a small-to-medium sized department by international standards.

Research published by members of the Department of Psychology was published in some of the highest ranked Psychology and interdisciplinary journals. For example, work was published in *Clinical Psychological Science*, *British Medical Journal*, *Psycho-Oncology* and *The Cochrane Database of Systematic Reviews*.

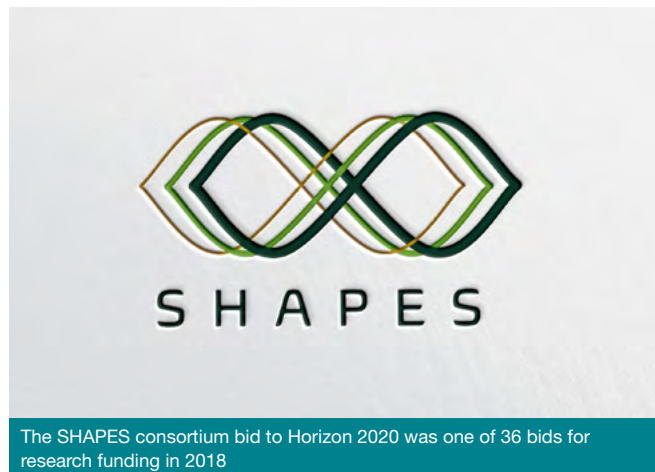
The published research of the Department of Psychology is high impact. For the period 2016-2019, the field-weighted citation index for our published research is 1.56; this indicates that our research is cited 56% more frequently than world-wide disciplinary norms for the areas in which we publish. According to Sci-Val, this is the highest field-weighted citation index for any university psychology department in Ireland. For the same period, our research was cited 1,626 times. 18.7% of our published output is amongst the 10% most cited publications world-wide; 28.6% of publications in that period were in the top 10% of journals ranked by citations. Our research work is strongly international. For the period of 2016-2019, 70.9% of our published work involved international co-authors/ collaborators.

Two major books were published by members of the Department of Psychology in 2018. "*Behavioural Neuroscience*" by Dr Séan Commins, published by Cambridge University Press, is a major textbook covering a range of topics in behavioural neuroscience. "*Why Science Needs Art: From Historical to Modern Day Perspectives*" by Dr Richard Roche, Dr Séan Commins and departmental PhD graduate Dr Francesca Farina, explores the complex relationship between these seemingly polarised fields. Reflecting on a time when art and science were considered inseparable and symbiotic pursuits, the book discusses how

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they have historically informed and influenced each other, before considering how public perception of the relationship between these disciplines has fundamentally changed.



The Department of Psychology has enjoyed considerable success in attracting significant amounts of external research funding. As of September 2019 there was live research funding of €10.9 million active in the Department of Psychology. In 2018, the Department of Psychology led 36 bids for research funding seeking in excess of €11.5 million, including the SHAPES consortium project bid to Horizon 2020 led by Professor Mac MacLachlan and Dr Michael Cooke. Further to this (and not included in the headline figure), Dr Desmond was the lead Maynooth University applicant, and co-principal investigator, of the ADVANCE Centre for Research Training successful bid to Science Foundation Ireland, an initiative with a total budget in excess of €13 million that will train 120 PhD scholars over the coming years. The amount of new funding achieved by the Department of Psychology in 2018/19 was €6.7 million. In the period of 1st January 2016 to 31st December 2018, the average research funding of a member of academic staff of the Department of Psychology was €587,000; this figure is 4 times greater than the University average funding per academic staff member FTE.

The Department has a strong commitment to the supervision and mentoring of doctoral research students and post-doctoral researchers. In the 2018/19 academic year, there were 33 registered research students in the Department of Psychology. This equates to a rate of supervision of 2.1 research students per academic staff member. The department also hosted 12 research associates and fellows in 2018/19.

Research by members of the Department of Psychology received significant national and international press coverage in 2018/19. Dr Brenda O'Connell co-presented with Professor Niall Moylan on RTÉ's Growing Up Live on how we develop in our 20's, focusing

on what science tells us about happiness during this life stage. Dr Michael Daly's work on self-regulation and health and well-being featured in the Irish Times. Dr Bryan Roche's work on intelligence featured in the Irish Times. Professor Sinéad McGilloway's work on the PRIMERA project on family interventions where a parent has mental health difficulties, received significant coverage across national media. Professor Andrew Coogan's work on sleep and type 2 diabetes received world-wide coverage via Reuters, and his expert opinion on the debate on daylight savings time was covered in a number of media outlets.

MAJOR RESEARCH HIGHLIGHTS 2018/19



Dr Deirdre Desmond

Dr Deirdre Desmond led the Maynooth University component, and is co-principal investigator, of the successful bid to Science Foundation Ireland for the Centre for Research Training in Advanced Networks for Sustainable Societies (ADVANCE), a doctoral training centre that currently has 14 research supervisors. Its supervisors are drawn from STEM and Social Sciences disciplines, including Psychology, Electronic Engineering, the Hamilton Institute, Law, Mathematics and Statistics, and Sociology. This major initiative is aimed at addressing the challenges of advances in technological capabilities continuing to outpace our understanding of the personal and social significance of such developments and the ethical, legal and policy frameworks to govern their deployment. The vision of the centre is to train the next generation of researchers seeking solutions to the technical and societal challenges of connectivity between large numbers of people and things.

The key findings of the ENRICH programme, led by Professor Sinéad McGilloway and the Centre for Mental Health and Community Research, were launched in September 2019. The ENRICH programme involved a five-year research investigation of a new service called the Upto2/Parent and Baby Programme which combines many different health and education-related parenting supports which was delivered to almost 400 parents and their 0-2

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year old children in West Dublin and Louth. The research, funded by the Health Research Board, found that the parents who received the programme became more confident and more satisfied in their role and adopted more sensitive and proactive styles and skills when managing their young infants. These benefits were also sustained after two years. Parent satisfaction with the programme was very high. This research highlights the case for more State support for parenting interventions in the earliest years; indeed, the National Economic and Social Forum stated a return on investment in this regard, of €4-€7 for every €1 invested. This research also provides an example of how university researchers can work successfully with multiple community partners who, in this case, included Archways, the Deansrath Family Resource Centre, the Clondalkin Community Healthy Living Initiative, the Connect Family Resource Centre and the Genesis programme.

Professor Mac MacLachlan and Dr Michael Cooke of the Department of Psychology and ALL Institute led the successful funding application for a major consortium to the EU Horizon 2020. The project, called Smart and Healthy Ageing through People Engaging in Supportive Systems (SHAPES), will be spread across four years and aims to find ways of helping Europe's ageing population live actively and independently at home in their communities with the support of assisted living technology. In Europe and elsewhere, better access to healthcare is leading to an increase in the average age of populations. This results in a population at greater risk of cognitive impairment, frailty and multiple chronic health conditions. These can have considerable negative consequences for independence and quality of life of older people, and for the sustainability of health and care systems. SHAPES aim is to achieve large-scale deployment of integrated technology to achieve independence and a quality of life for older people. This is a €21m European research project consisting of 36 partners across 14 countries and is the largest ever grant for healthcare research led by an Irish institution. The Maynooth University component of the project is funded to €2.8 million. This is the first EU framework consortium grant coordinated by Maynooth University.

A number of members of the Department and the ALL Institute made major contributions to the World Health Organisation GReAT Consultation 2019 held in Geneva, an event which brought academics, practitioners, policy makers, and assistive technology users together to guide the content development of the Global Report on Effective access to Assistive Technology.

The Department of Psychology proudly hosted *The Psychology, Health and Medicine Conference*, chaired by Dr Laura Coffey. This annual celebration of health psychology on the island of Ireland is now in its sixteenth year, and represents a highly successful ongoing collaboration of the Divisions of Health Psychology in the Psychological Society of Ireland and the British Psychological Society Northern Ireland Branch. Over 120 delegates from Ireland

and further afield attended the conference, with representation from a broad range of third level institutions, healthcare organisations and service providers. The conference had a packed schedule, including 30 oral presentations and 54 poster presentations showcasing a diverse range of high-quality innovative research at the interface of psychology, health and medicine, and featuring three internationally renowned keynote speakers – Ms. Marie Ennis-O'Connor, patient advocate and expert in healthcare social media; Professor Claire Foster, Professor of Psychosocial Oncology and Director of the Macmillan Survivorship Research Group at the University of Southampton; and Professor Carsten Wrosch, Research Chair in Ageing and Health and Professor of Psychology at Concordia University, Montreal, Canada.

As well as some of the research highlights described earlier which have strong engaged-components, other examples of engaged research undertaken by members of the department in 2018/19 are:

Professor Andrew Coogan continued his ongoing collaboration with the **Diabetes Centre** at Blanchardstown Hospital, examining the significance of sleep for the management of type 2 diabetes. Further, he delivered a report to the Garda Representative Association on experience of, and attitudes to, duty rosters in An Garda Síochána. This work involved a survey of nearly 5,000 rank-and-file Gardáí in order to help inform future work-practice reforms in An Garda Síochána.



Dr Philip Hyland was appointed by the Global Collaboration on Traumatic Stress to lead a project called '**G-Stress**' to determine global prevalence rates of disorders specifically associated with stress (www.global-psychotrauma.net/). Dr Hyland was also an invited speaker at a conference in the UK for the British Psychological Society's Crisis, Disaster and Trauma Psychology Section on Complex PTSD. Dr Hyland also established a formal research collaboration with the HSE's Keltoi centre for drug rehabilitation, Merchants Quay Ireland, CBM Ireland, Uppsala

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Hospital, and the City of Vienna's Women's Department for a programme of engaged research.

Dr Rebecca Maguire engaged with the European Multiple Sclerosis Platform (EMSP) on a project designed to meet the needs of paediatric MS caregivers. Dr Maguire was also awarded a place on IPPOSI (The Irish Platform for Patient Organisations, Science and Industry) patient education programme which ran through 2019. This has led to a greater awareness of considerations and importance of engaging patients and public in research (PPI) and this knowledge is being used to actively contribute to the recently formed Maynooth University Public Patient Involvement working group.

Professor Sinéad McGilloway supervises the Irish Research Council funded "*More than a Selfie*" project, an employment-based piece of research in collaboration with Bodywhys (www.bodywhys.ie). This project investigates the impact of social media on body image and self-esteem in secondary school children, and the team are developing and evaluating an intervention aimed at addressing issues related to social media in young people. Professor McGilloway's PRIMERA team also hosted a 'Family Talk Rally' and 'Family Talk Masterclass' in 2018 and 2019, two engagement and training events attended by well over 100 AMHS and CAMHS clinicians across the country, and including service user involvement.

Dr Unai Diaz-Orueta leads the Maynooth University component of the CAPTAIN consortium. CAPTAIN (Coach Assistant via Projected and Tangible Interface) is an EU H2020 funded project that uses innovative 'transparent' technology designed to turn the home of the older adult into a ubiquitous personalised coaching assistant specifically designed to compensate for physical and cognitive impairments encountered during everyday living. This project combines the use of projected augmented reality, 3D sensing technologies, speech analysis, non-invasive physiological and emotional data analysis (e.g. facial micro-expressions and body pose) to provide contextualised (e.g. directly projected onto the real world) and personalised coaching to older adults living at home. The consortium is made up of a multi-disciplinary team which feature technological, scientific, business, clinical, economic and policy-level competence across a number of public bodies and enterprises.

Dr Richard Roche led **The Recall Initiative**, a two-year IRC New Horizons project (initially called the SEAN-Key project) which investigated the beneficial effects of a six-week programme of semi-structured, group-based guided reminiscence (known as Reminiscence Therapy) on cognitive and psychological measures. The programme was run with groups of community-dwelling older adults across four locations (Maynooth, Tallaght, Swords, city centre), and with a group of people with a diagnosis of dementia in Peamount Hospital. Audio recordings of the content of weekly

sessions were uploaded to a designated section of the Digital Repository of Ireland where participants and researchers can search and study the qualitative contents. The Reminiscence intervention showed some signs of benefits to the dementia group, which small improvements on aspects of autobiographical memory, which similar benefits were evident for a participant with Transient Episodic Amnesia. The initiative relied heavily on engagement from the local community and amenities (e.g. the local public libraries), and involved a strong Public Patient Involvement component. Content from the recordings will form the basis for an Illuminations Exhibition in early 2020.

DEPARTMENT OF THEORETICAL PHYSICS

The Department of Theoretical Physics hosts 6 academic staff who published 12 articles in peer reviewed journals and 3 peer reviewed conference proceedings in 2018. The department was very successful in the 18/19 round of competitive Government of Ireland postgraduate scholarship programme from the Irish Research Council winning 2 PhD scholarships both under the supervision of Dr Masud Haque. The students' research programmes will encompass research on quantum matter approaching chaos and quantum dynamics of bosonic many-body systems. In addition 2 PhD students graduated in 18/19.

COSMOLOGY AND ASTROPHYSICS

Professor Peter Coles's main work is on statistical cosmology, with a particular emphasis on the large-scale structure of the Universe and the cosmic microwave background. In the period covered by this report his work has largely focused on developing and testing methods for the analysis of relevant data sets (either alone or in combination).

A particular focus of this work is preparation for the European Space Agency's Euclid mission, which is due for launch around 2020 and which will be used to probe the nature of dark matter, dark energy and the geometry of the expanding Universe. Professor Coles is a full member of the Euclid Consortium and is in the Galaxy Clustering Working Group currently preparing analysis methods for the exploitation of the resulting survey data. The involvement of Maynooth in the scientific exploitation of the Euclid mission gives the Department a unique opportunity, both for research and for its enormous potential for outreach and science communication.

The early part of May 2019 saw a number of major outreach events based on the centenary of the 1919 Eclipse Expeditions that measured the gravitational deflection of light by the Sun and thus tested Einstein's general theory of relativity. These included several public talks by Professor Coles in Ireland and in the UK, an interview with Pat Kenny on Newstalk Radio, and a piece for RTÉ Brainstorm.

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The Open Journal of Astrophysics, an online Open Access journal published by Maynooth Academic Publishing, was launched

In addition, Professor Coles is responsible for a major new scientific publishing initiative at Maynooth University with the launch of *The Open Journal of Astrophysics*, an online Open Access journal published by Maynooth Academic Publishing, which has already attracted a number of high-profile and highly cited scientific papers.

GENERAL RELATIVITY AND FIELD THEORY

Over the period covered by this report, Professor Brian Dolan has continued to work on:

- > Thermodynamics of Black Holes in semi-classical General Relativity.
- > Relativistic quantum field theory in particle physics models.
- > Non-commutative geometry in field theory.
- > Quantum field theory in condensed matter systems, in particular in the context of infra-red emergent symmetries in the quantum Hall effect.

Professor Dolan's work on thermodynamics of black holes has received especially significant amount of attention from the international community, especially the suggestion that the cosmological constant in the equation of state for a black holes in an asymptotically anti-de Sitter or de Sitter space-time plays the role of a thermodynamic pressure whose conjugate thermodynamic variable gives an invariant meaning to the volume of the black hole. One of the papers on this topic already has over 120 citations (google scholar).

FAR-FROM-EQUILIBRIUM QUANTUM DYNAMICS

Dr Haque's recent work in this area has covered:

- > Propagation and scattering phenomena in quantum lattices.
- > Thermalisation and relaxation dynamics.

- > The role of integrability in dynamical phenomena.

In addition to a strong profile in quantum non-equilibrium physics, Dr Haque has also contributed significantly to the theory of many-particle physics in laser-cooled trapped atomic gases and the application of quantum information concepts (entanglement measures) to condensed matter phenomena, such as topological ordering.

NON-PERTURBATIVE QUANTUM FIELD THEORY

Dr Jonivar Skullerud's research in these areas has covered:

- > Non-perturbative quantum field theory, in particular lattice gauge theory.
- > Quantum chromodynamics (QCD) at high temperature and density, and phenomenology of heavy-ion collisions.
- > The problem of colour confinement; quark and gluon correlation functions.
- > Bayesian inference and methods for solving inverse problems.

Dr Skullerud is a leading member of the FASTSUM collaboration, comprising researchers from Florence, Sejong (Korea), Swansea and Trinity College Dublin as well as Maynooth. The focus of the collaboration is on the study of the quark-gluon plasma using anisotropic lattice QCD. A highlight in the period of the review was the first calculation of the electrical conductivity in QCD above and below the de-confinement crossover; the two publications arising from this have received over 200 citations to date.

TOPOLOGICAL PHENOMENA IN CONDENSED MATTER PHYSICS AND THEIR APPLICATION TO TOPOLOGICAL QUANTUM COMPUTATION

Dr Joost Slingerland's research in these areas has focused on:

- > Topological Field Theory.
- > Lattice models which realize topological orders with local Hamiltonians.
- > Fractional quantum Hall systems and related strongly correlated systems with nontrivial topological order.
- > Dynamics of systems with topologically stored quantum information, particularly quantum wires with topological edge modes.

Over the period covered by this report, Dr Slingerland's group developed a number of methods for the study of trial wave functions in quantum Hall systems and their entanglement properties. We also introduced new trial wave functions which may describe certain Hall systems on lattices. We were among the first to consider quantum

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quenches in topologically ordered systems. Recently, we have focused on dynamical and spectral properties of quantum wires, which are relevant to fault-tolerant quantum information processing.

TOPOLOGICAL QUANTUM FIELD THEORIES

Dr Vala's work in this area has covered such topics as:

- > Topological phases in lattice models and condensed matter systems.
- > Topological and conventional quantum computation.
- > Quantum control and algorithms.
- > Theory of open quantum systems and quantum error correction.

Dr Vala's group has investigated the realization of topological quantum field theories in two-dimensional quantum lattice models with applications of these systems in topological quantum information processing. Specifically, a solution of the Kitaev honeycomb model has been developed on manifolds with dislocation defects based on Jordan-Wigner fermionisation. We believe that these systems constitute a realization of extended topological quantum field theories. The group has also generalized its previous solution of the Kitaev model on a torus to manifolds of higher genus. While we have confirmed the topological properties the ground state of these higher genus systems, as expected from their effective theories, we now also have full access to their fermionic band structure. In addition, the group has proposed a realization of topological lattice models using nanowire networks.

The group's work on conventional quantum computation involved development of quantum algorithms and quantum control techniques for optimal generation of quantum computing operations. Special attention was given to operations, which are able to create maximally entangled states out of some product states, known as perfect entanglers. The group designed a control functional for optimal quantum control to generate two-qubit perfect entanglers and showed their superior convergence properties. They also studied metric properties of two-qubit operations and calculated analytically that two-qubit perfect entanglers form 84% of all two-qubit operations.

In December 2019 Dr Vala was a member of a research consortium that was awarded €7.3 million under the Government's Disruptive Technologies Innovative Fund. The project *Quantum Computing in Ireland: A Software Platform for Multiple Qubit Technologies*, will explore their potential to address challenging problems arising in areas such as financial services, logistics or drug discovery.

The consortium comprises IBM Ireland Ltd, MasterCard Ireland, Rockley Photonics and Equal 1 Laboratories, Maynooth University, the Tyndall National Institute (Cork) and University College Dublin. The budget allocation to Maynooth University is €600,000. The project is to start in 2020 and is for the duration of three years.

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DEPARTMENT OF APPLIED SOCIAL STUDIES

Research achievements and activities in the Department of Applied Social Studies in 2018-19 illustrate the broad range of academic, professional and civic engagement interests and commitments of departmental staff.

The interdisciplinary and multidisciplinary nature of the Department's scholarship was reflected in the international peer-reviewed journals in which articles authored or co-authored by Applied Social Studies staff were published. These included *Social Work Education* (Dr Niamh Flanagan), *European Journal of Social Work* and the *Journal of Social Work Practice* (Dr Gloria Kirwan), *Geoforum* (Dr Rory Hearne), *Criminology and Criminal Justice* (Dr Kathryn McGarry), *Children and Youth Services Review* (Professor Maurice Devlin), *European Societies* (Dr Niamh Flanagan). Having previously published scholarly papers and reviews in the international journal *Groupwork*, and co-edited a special issue, Dr Gloria Kirwan was competitively appointed as Editor of the journal in 2018.

A special volume of the journal *Practice Insights* (International Association for Community Development) was edited by Dr Ciara Bradley and Anastasia Crickley and drew on contributions to the World Community Development Conference held at Maynooth University in June 2018.

A groundbreaking new volume in the Rowman and Littlefield monograph series 'Global Political Economies of Gender and Sexuality' was co-edited by Dr Kathryn McGarry (with Sharron A. Fitzgerald) with the title *Realising Justice for Sex Workers* (London/ New York 2018). Bringing together transdisciplinary scholars from several continents, the book addresses a rights-based agenda for sex work law and policy and, consequently, for the lives of sex workers themselves.

Professor Maurice Devlin continued as a member of the editorial team for the 'Perspectives on Youth' series published by the Youth Partnership of the European Commission and the Council of Europe. *Young People in a Digitalised World* (Strasbourg 2018) was the fourth volume in the series. This theme is directly related to some of the teaching undertaken in the Department of Applied Social Studies, including a highly innovative Certificate in Digital Creativity in Youth Settings introduced in 2018, run in partnership with Camara Education Ireland and the TechSpace Programme and directed by Dr Hilary Tierney.



Dr Niamh Flanagan, co-organiser of the inaugural All-Ireland Social Work Research Conference

Reflecting the expansion and diversification of programmes of teaching and research within the department, and specifically the introduction of professional social work education, Dr Niamh Flanagan was co-organiser with colleagues in Trinity College Dublin and University College Dublin of the first All-Ireland Social Work Research Conference in July 2019. Dr Gloria Kirwan and Dr Brian Melaugh also contributed to the conference.

Staff led and or were active in European Union-funded research on the themes of old age and social exclusion and e-learning in youth work education and training. Dr Joe Larragy was a member of the Management Committee for the ROSEnet COST Action (CA 15122) on Reducing Old-Age Social Exclusion: Collaborations in Research and Policy. Involving researchers, policy stakeholders and older people, ROSEnet adopts a new and innovative approach to knowledge production and knowledge transfer on multi-dimensional forms of disadvantage in later life.

Dr Hilary Tierney was Principal Investigator (with Co-PI Professor Maurice Devlin) for the Erasmus + funded Youth Work e-Learning Project (YWeLP) which successfully concluded with a conference in Maynooth University in August 2019. The project involved collaboration with partners in the University of Tallinn, Estonia; HUMAK University of Applied Sciences, Helsinki, Finland; Ulster University; and Victoria University, Melbourne, Australia. Each participating higher education institution also partnered with a civil society organisation, which in the case of MU was the National Youth Council of Ireland.

More generally, partnership with civil society, and direct engagement with the worlds of policy and practice, continued to be key aspects and distinctive strengths of the Department's scholarship.

Dr Oonagh McArdle served as Executive Committee member and Vice-Chairperson of the European Community Development Network. Dr Seamus Taylor was Chairperson of the Irish Penal Reform Trust, Ireland's leading NGO in the area of penal reform.

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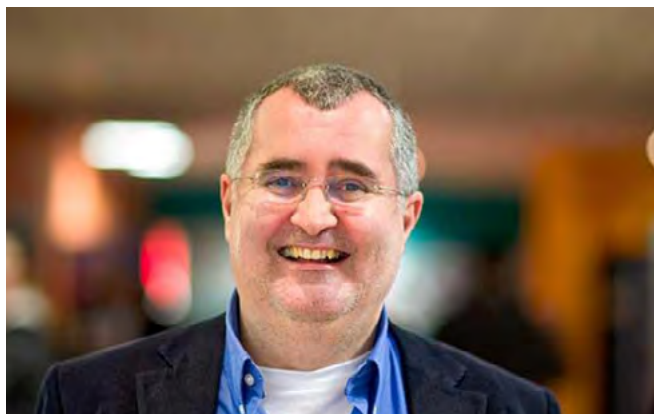
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Professor Maurice Devlin was a Director of LGBTI + Youth Service BeLonG To and of the Youth Work Committee of Education and Training Boards Ireland. As a Board Member of Merchants Quay Ireland, Dr Brian Melaugh participated in a steering committee overseeing research into, and the implementation of, a safer injecting facility, part of the *National Drug Strategy: Reducing Harm, Supporting Recovery 2017-2025*. Dr Joe Larragy continued as founding chairperson of Maynooth Green Campus, whose work reached a high point in 2018-19 with the achievement of the Green Flag award in six areas.

Professor Maurice Devlin acted as consultant with Léargas, the National Agency for exchange programmes in Adult Education, School Education, Vocational Education & Training and Youth, on the Research-based Analysis and Monitoring of European Youth Programmes (RAY), a multi-national and multi-annual research study examining the beneficial outcomes for individuals and organisations participating in international and intercultural exchange. Professor Devlin was also a member of the Assessment Panel for the Children's Rights Alliance's *Report Card 2019*, an annual assessment of the Government's progress in developing and implementing effective and appropriate policies and services for children.

Dr Niamh Flanagan worked with Pavee Point Traveller and Roma Centre and the Department of Justice and Equality to produce the statistical analysis for a national needs assessment of Roma in Ireland.

Dr Joe Larragy was a member of the Pensions Policy Research Group. PPRG is an independent, multidisciplinary research group, which was set up to carry out research on Ireland's public and private pension systems. The Group's primary focus is on reform of the Irish pension system, the costs and distribution of pension tax reliefs and the effectiveness of the pension system in delivering income in retirement to older people. Dr Larragy was also Principal Investigator on a project evaluating a new tablet computer for older people, conducted in association with Age Friendly Ireland.



Dr Seamus Taylor, member of the Department of Public Expenditure and Reforms expert group on Equality Budgeting

Dr Seamus Taylor was a member of the Department of Public Expenditure and Reforms expert group on Equality Budgeting, whose aim is 'to develop the process of budget and policy proofing as a means of advancing equality'. Dr Taylor is the only member of the group from a higher education institution. Dr Taylor also continued his work as a member of the Windrush Lessons Learned Review, established by the UK Home Secretary to identify lessons to be learned from the treatment of Windrush generation migrants from the Caribbean to Britain.

Dr Rory Hearne was a member of the Steering Group of the right to housing advocacy group, *Home for Good*, which also includes members from the Mercy Law Centre, Barnardos and the Simon Communities of Ireland. Dr Hearne actively disseminated the results of his research and analysis on housing and other aspects of social policy, politics and economics through regular contributions to online media (including the podcast Reboot Republic) and national newspapers and radio. On 14 November 2018 he presented the findings of his research into Public Private Partnerships, Neoliberalism and Housing to the Oireachtas Joint Committee on Housing, Planning and Local Government.

SCHOOL OF BUSINESS

The School of Business employed 31 academic staff members in 2018/19. In 2018 School faculty published 19 peer-reviewed refereed journal articles, 1 authored book, 1 edited book, 4 book chapters, 9 conference publications and 3 reports. The faculty presented 57 papers at various leading international conferences.

The Chartered Association of Business Schools (ABS) Academic Journal Guide is a leading international benchmark for the range and quality of journals in which business and management academics publish research. 1400 journals are ranked as 4*, 4, 3, 2 or 1, with 4* being reserved for 33 journals of distinction which are recognised world wide as exemplars of excellence (top 2.4%). ABS 4 journals (top 6%) publish the most original and best executed research and typically have high submission and low acceptance rates. Another internationally recognized indicator of research excellence in the field of business and management is the Financial Times 50 (FT50) journal list, which includes 50 journals in the field considered to be of the highest quality.

In 2018, 15 of the 19 peer-reviewed journal articles from the School of Business were published in ABS ranked journals, with 1 of these an ABS 4* journal, 1 in an ABS 4 journal and 6 in ABS 3 journals. 2 of these were published in FT50 journals. In summary, 42% of all journal articles published by the School of Business faculty appeared in the journals that are classified as publishing original and well-executed research (ABS 3, 4 and 4*), and 11% appeared in the outlets that publish the most original and best executed research in the field (ABS 4 and 4*, and FT50). These ABS 4 and 4* and FT50 papers are:

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- > McNamara, P., Pazzaglia, F. and Sonpar, K. (2018) 'Large-Scale Events as Catalysts for Creating Mutual Dependence Between Social Ventures and Resource Providers'. *Journal of Management*, 44 (2):470-500 (ABS 4*, FT50).
- > Mountford N., Geiger S. (2018) 'Duos and Duels in Field Evolution: How Governments and Interorganizational Networks Relate'. *Organization Studies* (ABS 4, FT50).



Professor Peter McNamara

These two tremendous successes are by Professor Peter McNamara, the Head of the School, and Dr Nicola Mountford, an early-stage career researcher who recently joined School of Business. This reflects the overall situation in the School where faculty members at various stages of their career are supported to deliver top-level research outcomes. It also demonstrates that Management is a particular area of research excellence at the School of Business.

Publication trends in the school over the 5 years 2014/2019 indicate a steady shift towards a higher share of peer reviewed journal publications, and a shift towards a higher share of ABS 3 and 4 papers, which is an explicit strategic goal of the School.

The quality of the research done at the School of Business is evidenced by the research paper awards received by our faculty during the 2018/2019 academic year. In particular, Dr Christina O'Connor received the "Jay Lindquist Award" for Best Conference paper at the AMS World Marketing Congress 2019 (the leading international forum in the marketing field) for her paper Ferguson, S., Tree, E., Pitt, C., O'Connor, C. and Vella, J. "Clustering the critics: using textual analysis to distinguish different groups of influential wine bloggers". Dr Tatiana Andreeva received the "Highly Recommended Paper Award" at the International Forum on Knowledge Asset Dynamics 2019 (the leading forum in the knowledge management area), for the paper Dávila, G., Andreeva, T., Varvakis, G., Saetre, A.S. "Exploring the antecedents of knowledge absorptive capacity: (How) are social integration mechanisms useful in Brazilian firms?". Dr Andreeva also received

an "Outstanding Paper Award" at the Literati Network Awards for Excellence 2018, managed by the Emerald Publishing House, for her paper Jukka, M., Andreeva, T., Blomqvist, K., Puumalainen, K. "A cross-cultural perspective on relational exchange", published in the *Journal of Business and Industrial Marketing* in 2017.

School of Business faculty were involved in organizing a number of research conferences. For example, Professors Brian Donnellan and Markus Helfert served as Programme chairs at the 8th International Conference on Smart Cities and Green ICT Systems (May 2019, Greece). Dr Christina O'Connor, Dr Marian Crowley-Henry and Dr Edward O'Connor hosted the Doctoral Colloquium at the Irish Academy of Management Conference in August 2019. Dr Olga Ryazanova and Dr Bastian Rake received Outstanding Reviewer Awards from Academy of Management Annual Conference 2019 – the leading international conference in the management field.

The School of Business hosted two Paper Development Workshops for management education journals: the first was for the *Academy of Management Learning & Education* journal (ABS 4) in May, 2019. The second paper development workshop was for a Special Issue of the *Journal of Management Education* (ABS 2) on 'Experiential Learning and Large Classes' (September 2019). Both events were led by the editors-in-chief of these journals and attracted attendees from the US, the UK and colleagues from universities in Ireland. These collaborations with two of the three major management education journals demonstrate our faculty's active engagement with, and commitment to, research and practice in the area of management education and learning.

Professor Peter McNamara, Dr Olga Ryazanova and Dr John Cullen were invited to join the editorial board of the *Academy of Management Learning & Education* journal (ABS 4). Professor Audra Mockaitis received the Best Reviewer Award from the *Journal of World Business* (ABS 4) in 2018, and Dr Tatiana Andreeva received the Best Reviewer Award from the *Management and Organization* journal (ABS 3). This indicates the recognition of the expertise of our faculty and acknowledgement of their contribution to the field by the international research community.

External funding secured by members of the School exceeded €510K in 2018/19 with the largest successes being Professor Brian Donnellan securing funding through EU Horizon 2020 Marie Skłodowska-Curie programme for the ALECS project which is linked with the SFI Research Centre Lero, and Professor Markus Helfert securing funding through the SFI Research Centres Lero and Adapt and through the SFI Spoke project FINTECH FUSION. Additionally, Professor Helfert coordinates the EU Project 'PERFORM', which is funded under the Marie Skłodowska-Curie Innovation Training Network Programme. Professor Donnellan is academic director of the Innovation Value Institute, a designated interdisciplinary research centre of the University, which works collaboratively with industry partners in the area of management of digital business

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transformation. Professor Helfert joined the School of Business this academic year as a Professor in Digital Service Innovation and the Director of the Business Informatics Group at Maynooth University. These successes demonstrate the strength of the Management Information Systems area in the School of Business in attracting external funding.

School of Business faculty actively engage with industry and the broader community through collaborative research with industry and the dissemination of research to the wider community through various forums. This includes organizing workshops for various stakeholders, membership in various industry bodies and committees and consulting for industry. Our dissemination efforts include a wide range of invited presentations at different practitioner-focused forums and opinion pieces published in various mass media, including four opinion pieces published in RTÉ Brainstorm.

An example of engaged research collaboration with industry is a project led by Professor Brian Donnellan for Analog Devices (ADI), jointly with the SFI research centre Lero. The project was aimed to develop a roadmap for business model change as ADI experimented to change their automation business unit from a traditional channel-based model to a sensor-as-a-service business model. The project also aimed to develop business model scenarios for platform business models, in order to understand how platform facilitators grow their business over time, managing competency and relationship development.

Another example of the School of Business's research engagement with external stakeholders and wider community is a research project by Dr Marian Crowley-Henry on the future workers in collaboration with social enterprise Zeminar and Dr Mary Collins (RCSI). This project was supported by Enterprise Ireland Innovation voucher. The project resulted in a report to Zeminar which will be incorporated into future annual events on wellbeing for Gen Z and in an opinion piece published on RTÉ Brainstorm. Another example is a project by Dr Paul Donovan on the usage and utility of 70-20-10 model of learning used by practitioners, in collaboration with the Irish Institute of Training and Development.

School of Business faculty actively engage with various external stakeholders in their research and research outreach activities. Between October 2018 and September 2019 these included:

INTERNATIONAL ACADEMIC CONFERENCES ORGANIZED

- > 8th International Conference on Smart Cities and Green ICT Systems. May 3-5, 2019, in Heraklion, Crete, Greece. (Lero, Enable): Program Chairs: Brian Donnellan (Maynooth University), Cornel Klein (Siemens), Markus Helfert (DCU).
- > 22nd Pacific Asia Conference on Information Systems (PACIS 2018) Yokohama, Japan. *Smart Cities, Smart Tourism, and*

Internet of Things; Track Co-chairs: Brian Donnellan (Maynooth University), Chulmo Koo (KyungHee University), Jaehyun Park (Tokyo Institute of Technology).

- > 23rd Pacific Asia Conference on Information Systems (PACIS 2019) Xi'an, China: *The Changing Nature of Work Research Workshop*. Organizers: Brian Donnellan (Maynooth University), Jungwoo Lee, (Yonsei University), Cai Shun (Xiamen University).

COLLABORATIVE ORGANISATION OF SMART CITY FORA

- > All Ireland Smart City Forum (AISCf): Facilitation of a forum represented by all the cities on the island of Ireland focused on the deployment of, and value creation generated by Smart City programmes. The 3rd annual AISCf conference (Oct 22nd 2018) was attended by ~ 180 people from both the public and private sectors. The focus was on challenges and opportunities for smart cities and regions. (smartcitiesireland.org/events/all-ireland-smart-cities-forum-2018-conference-presentations/).
- > The All Ireland Smart Cities Forum (AISCf) and the Nordic Embassies in Dublin launched the Nordic-Irish partnership for smart and sustainable city development on the 14th May 2019. The partnership sees representatives from the four Nordic countries of Norway, Finland, Denmark and Sweden form a new alliance that builds on an existing EUR 6 Billion Irish-Nordic trading relationship for goods. (smartcitiesireland.org/events/nordic-irish-partnership-smart-cities-2019/).

WORKSHOPS AND SEMINARS ORGANIZED OR DELIVERED

- > **"New modes of engaging Academic-Industry collaborative research"**, Professor Brian Donnellan, 40 attendees from academia and industry met for a series of expert talks and focus groups to discuss current policy and practice in the area of Academic-Industry Collaboration. Speakers included: Professor Andrew Van de Ven (University of Minnesota); Professor David Wastell (Nottingham University); Dr Alison Campbell, Director of Knowledge Transfer Ireland. (Lero, Confirm).



The Shaping health and wellbeing for 2025 workshop allowed the general public to participate through an interactive game

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- > **“Shaping health and wellbeing for 2025”, Professor Markus Helfert, 24/10/2019.** An interactive workshop with the general public at Maynooth University during MU Research Week. (www.maynoothuniversity.ie/news-events/are-you-interested-shaping-health-and-wellbeing-2025-let-s-make-it-happen-together-interactive). The workshop was designed for the general public (school and university students, parents, senior citizens, academics, etc.) and it is connected to the ongoing research on patient empowerment/engagement in MU. It allowed participants to explore and discuss the present and future of health and wellbeing to identify challenges and benefits. The workshop was built around an interactive game, where all participants proposed their vision of a health and wellbeing environment for 2025, one that is feasible and provides benefits to all citizens.
- > **“Patient Empowerment and Search of Health Information on the Internet”, Professor Markus Helfert, 27/06/2019.** Focus group with elder citizens belonging to the Age Friendly University (AFU). Elder citizens were asked to answer and discuss the following questions: Do you search for health information? Where do you search? What type of health information do you search for? How do you use the resulting information? Do you use search engines for searching for health information? Advantages and disadvantages? What are the most important characteristics a health search engine should have in order to, easily and quickly, find the health information you are searching for? What do you think of patient empowerment?
- > **Leading the Training Function,** Dr Paul Donovan delivered this training seminar as a part of a flagship programme of the Learning & Development (L&D) industry for professionals wishing to qualify as L&D executives. This seminar promotes the name and the research of MU to a wide audience of 1200 member companies of IITD and the organisations who attend this programme annually.
- > **Presentation at IVI / EI Digital Summit 2019 - Digital Service Innovation,** Professor Markus Helfert: 12/06/2019, Maynooth University (ivi.ie/ivi-june-summit-2019/). With this event we aim to encourage organizations to adapt to changes resulting from Digital Transformation. The collaborative event on June 12th 2019 had several respected international and local speakers from both a practitioner and academic background detailing how organisations are dealing with these new challenges. It also included interactive workshop sessions offering practical insights participants could bring back to their organisations to address the opportunities and challenges of digital disruption. Professor Markus Helfert presented on his research related to Digital Service Innovation.
- > **Panel presentation at IDGIT2 Project - National Event Bridging the Innovation Gap Between Research & Market Impact using Standardisation,** Professor Markus Helfert, 11/09/2019. Professor Markus Helfert was invited to be a member of the discussion panel at the event.
- > **Presentation at the First National Smart Farming and Data Analytics workshop:** Dr Christina O’Connor was invited as a guest speaker to engage with farmers, businesses and academics on the use of big data within the farming sector.
- > **Guest talk at GLAS Trade Show:** Dr Christina O’Connor, July 2019. Dr Christina O’Connor was invited by Bord Bia’s Thinking House to speak at the GLAS Trade show on the role of big data within horticulture / small businesses. GLAS Trade Show is the largest horticultural show in Ireland - with policy makers, government support bodies and industry in attendance.
- > **Presentation at Creating Economic and Business Opportunities from Climate Change,** Dr John Cullen, Tullamore Court Hotel, Tullamore. Co. Offaly. Dr John Cullen was invited to present on ‘The Business Model of Innovation’ and be a panel member.

INVITED PRESENTATIONS AT PRACTITIONER-FOCUSED FORUMS

- > **Presentation at the Food, Retail and Hospitality Exhibition, City West,** Professor Markus Helfert and Gültekin Cakir: 05/09/2019. Topic: "Digital Transformation in Food and Grocery Retailing – Time to Rethink Strategy and Operations": Markus and Gültekin took part in the largest gathering of food industry professionals in Ireland in City West, an exhibition highlighting key trends and challenges for practitioners (“Food, Retail & Hospitality Show Ireland 2019”). They presented a topic discussing the digital transformation on strategic and operational perspective in food and grocery retailing. The speech is linked to “PERFORM – a European Training Network” / Horizon2020 funded project (www.perform-network.eu) and showed interesting insights and relevant results for practitioners.



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- > **Presentation at the Smart Cities and Regions Summit**, Dr Niall Connolly, May 9, 2019. Dr Niall Connolly presented at the Industry Smart City conference held in Croke Park. The presentation focused on the dynamic competency development with local councils in order to manage technology ecosystems.
- > **Guest talk at IITD Practitioner Conference**: Dr Paul Donovan, October 2018. Dr Paul Donovan was invited by the Irish Institute of Training and Development (IITD) to speak at the member conference on research that the Institute invited him to conduct, on its behalf, on the role of the 70-20-10 learning model. Dr Donovan had been asked to examine how organisations were using this model that had been both ignored and rejected by academia. Dr Donovan's research showed how practitioners found utility in a model that had conflicted academics. The members agreed that Dr Donovan's research led to a greater understanding between practice and academia.

MEMBERSHIPS IN VARIOUS COMMITTEES AND NETWORKS:

- > Membership of Smart Dublin steering committee; Professor Brian Donnellan and Dr Niall Connolly are members of the Smart Dublin Steering Committee, where the four Dublin local authorities collaborate on developing smart technology, policy and implementation.
- > Membership of Smart Docklands Network: Professor Brian Donnellan is a member of the Smart Docklands Network, overseeing the development of Dublin's docklands.
- > Membership of Limerick's Digital Leaders Network: Professor Brian Donnellan and Dr Niall Connolly are members of Limerick's Digital Leaders Network, overseeing the development of Limerick's digital strategy.
- > City Digital Strategy Support: Support is given to Irish cities in their development of Digital Strategies, which includes: internal and external stakeholder workshops; and technology readiness assessments. Cities currently being supported are: Derry & Strabane; Cork; Dun Laoghaire; Rathdown; Fingal; Limerick.
- > Membership of the International Centre for Local and Regional Development (ICLRG): Professor Brian Donnellan is a director of the International Centre for Local and Regional Development, a North-South-US partnership programme created to explore and expand the contribution that planning and the development of physical, social and economic infrastructures can make to improve the lives of people in Ireland.
- > Membership of the National Standards Committee (ICTSCC): Professor Brian Donnellan sits on the board of the National Standards Committee.
- > Membership of Association for Information Systems, special interest group on educational research (AIS-SIGEd): Professor Brian Donnellan sits on the board of the AIS-SIGEd).

- > Membership of Asia Matters: Professor Brian Donnellan is Maynooth University's representative on Asia Matters – Ireland's Centre of Excellence for Asia Business Knowledge & Partnership.
- > Membership in ISO/IEC JTC 1/SC 40 "IT Service Management and IT Governance" Committee: Professor Markus Helfert is a member of the Standardisation Committee.
- > Membership in NSAI/TC 047/SC 22 Building Information Management (BIM) Committee: Professor Markus Helfert is a member of the Standardisation Committee, in particular advising on the Health Information Architecture.
- > Membership in NSAI Health Informatics Standards Consortium HISC SC6 Committee: Professor Markus Helfert is a member of the Standardisation Committee, in particular advising on the Health Information Architecture.
- > Membership of the Judging Panel at the National Training Awards: Dr Paul Donovan serves as judge at the premier competition for recognising Learning & Development excellence in Ireland. Dr Donovan's role includes deciding on a winning company from a group of 7 in a special category and engaging in a wider panel to approve winners from 50 company entrants. Total of 2000 companies eligible to apply.

RESEARCH WITH/FOR INDUSTRY

- > Collaborative research with the Irish Institute of Training and Development into the 702010 model of learning used by practitioners by Dr Paul Donovan. Seven core companies engaged in the principal research and 120 companies received the results of the study in a working paper format.
- > "Future proofing of golf membership - with focus on Youth and Female Players", the project by Dr Christina O'Connor, supported by Innovation Voucher 2018-2019 in conjunction with BooknPay. The project included interviews with Confederation of Golf, Golf Clubs - Captains, Synergy Golf and Maynooth University Golf Society.
- > Review of the Associated of the Library Association of Ireland professional award by Dr John Cullen, 2018. Based on this research, Dr John Cullen recommended significant changes to the process and levels of the award. These changes were implemented during 2019, and as a result, in addition to introducing the new SALAI award, the Professional Standards Committee (PSC) has developed new and revised supporting documentation for award candidates, administrators and assessors; revamped the Awards Assessors Panel comprising professionals in senior management positions from all sectors; addressed data protection requirements; and appointed two new awards administrators from within the PSC. This research for the LAI has resulted in new levels of professional awards and a process for accreditation.

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- > Research on the future workers in collaboration with social enterprise Zeminar by Dr Marian Crowley-Henry and in collaboration with Dr Mary Collins (RCSI). This project was supported by Enterprise Ireland innovation voucher. The project resulted in a report to Zeminar which they plan to incorporate into their future annual events on wellbeing for Gen Z. Over 100 companies take part in a Zeminar annual event, focused on wellbeing it is targeted at transition year students and senior second level students. It is attended by in excess of 10,000 students annually.
- > Two collaborative projects with Intel were led by Professor Brian Donnellan, jointly with the SFI Lero research centre:
 1. Attitudes of Over-65s to mobility and technology – an ethnographic study with a geographic reach that covered four European countries and had 70 participants. The study explored mobility issues experienced by older adults across Europe in order to understand (1) the potential impact of AV and (2) factors related to adoption of AV, (3) user experience related design criteria and (4) Mobility-As-A-Service (MaaS) business models.
 2. An investigation of emerging business models from OrganiCity, a cross-European funding, support and IT capability mechanism for experimentation of new urban data driven solutions that address pressing city challenges, with a core principle of ‘Co creation’ and ‘Real World Experimentation.’
- > Professor Brian Donnellan led a research project for Analog Devices (ADI), jointly with Lero. The project aimed to develop a roadmap for business model change. The context was an ADI experiment to change an automation business unit from a traditional channel-based model to a sensor-as-a-service business model. Another project was aimed to develop business model scenarios for platform businesses, to explore how platform facilitators grow their business over time, managing competency and relationship development.
- > Professor Brian Donnellan led a research project for Smart Dublin, jointly with Enable. The aim of the project was to develop ethical guidelines for smart city projects by completing: an overview of existing ethical frameworks in Smart Cities; an overview of the debate on ethics in the Public Sector with regards to data ethics and AI; and an initial appraisal of ethical frameworks in the adoption of smart technologies in cities.

CONSULTANCY / ENGAGED RESEARCH REPORTS (SOME ARE BASED ON THE PROJECTS LISTED ABOVE)

- > Cullen, J. (2018) Report on the Review of the Associated of the Library Association of Ireland professional award.
- > McLoughlin, S. (2019) “Preliminary Findings on the Practice, experience and perceptions of Academic Industry Collaborative Research Stakeholders”, presented at the New Modes of Engaging

- Industry Academic Collaborative Research Symposium, 2019.
- > McLoughlin, S. (2019) ‘Autonomous Vehicles for Independent Living of Older Adults’ at ADI Technology Day. May, Limerick, Ireland.
- > Medela A., et al. (2018) ‘Co-creating Smart Cities of the Future: Organicity Sustainability Plan & Activity Report’, EU H2020 Deliverables Report 6.1/6.3.
- > McLoughlin, S. (2018) ‘Connecting the dots: Young People, Social Inclusion and Digitalisation – Compendium of Practices’, European Union - Council of Europe Youth Partnership.
- > Crowley-Henry, M., Collins, M. (RCSI). Report on research on the future workers for Zeminar.

STUDENT INVOLVEMENT IN ENGAGED RESEARCH

- > **The Business Research Project (BRP)** is an element of our MSc programmes that provides a significant opportunity for students, supervised by faculty, to gain real world experience of a business issue. This is an important method through which the research informed, practice engaged values of the School of Business are brought to life and how we seek to live our mission of providing both developing critical thinkers and impactful knowledge for society. The BRP enables students and faculty to apply their research and practice skills to a problem that a client organisation faces. Postgraduates at the School of Business carry out research on any one of a wide number of business areas of strategic importance to organisations. This year we had 63 BRPs across 38 organisations located in the Maynooth University region. These organisations are working in a range of industries including Recruitment, Consultancy, Ventilation, Education, Financial Services and Fast Moving Consumer Goods. Industry partners for BRP include: E&Y, Pobal, Sonas, and Primeline.
- > **Participation in SPUR programme in Maynooth University.**



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This academic year the School of Business engaged in two SPUR projects:

1. The Role of Local Social Identity in Interorganisational imitation Choices: the case of strategic transformation of the Irish Rugby Football Union, supervised by Dr Olga Ryazanova and Professor Peter McNamara.
2. Big pharma, bad science? An analysis of retractions in bio-medical journals, supervised by Dr Bastian Rake.

RESEARCH OUTREACH: PUBLICATIONS IN MASS MEDIA

- > Gruda, J. & Hasan, S. (2019) Can artificial intelligence reduce anxiety in the workplace? RTÉ Brainstorm, 15 January 2019, (www.rte.ie/brainstorm/2019/0115/1023290-can-ai-reduce-anxiety-in-the-workplace/).
- > Rake, B. (2019) How to use LinkedIn more effectively, RTÉ Brainstorm, 21 May 2019, (www.rte.ie/brainstorm/2019/0520/1050657-how-to-use-linkedin-more-effectively/).
- > Crowley-Henry, M. & McFadden, C. (2019) How to turn up the LGBT voice in the workplace. RTÉ Brainstorm: (www.rte.ie/eile/brainstorm/2019/0121/1024566-how-to-turn-up-the-lgbt-voice-in-the-workplace/).
- > Cullen, J. (2019) Psychologist and Philosopher Face Off in Happiness Debate, Sunday Business Post (7th April, 2019) Main section: page 19.
- > Cullen, J. (2019) The surprising ways spirituality informs how we think about work. RTÉ Brainstorm, 11th July 2019 (www.rte.ie/brainstorm/2019/0711/1061455-the-surprising-ways-spirituality-informs-how-we-think-about-work/).
- > Ryazanova, O. (2019) Mobility and gender matter in speed of promotion and development of career capital. A blog post for CYGNA community (and other academic readers) at Ann-Wil Harzing website, May 17, 2019. (harzing.com/blog/2019/05/mobility-and-gender-matter-in-speed-of-promotion-and-development-of-career-capital).

DEPARTMENT OF DESIGN INNOVATION

The academic year 2018-19 saw a lot of development in the Department of Design Innovation, but also a change of personnel. For a small department of five researchers there was considerable success: winning Best New Postgraduate Programme at the Higher Education Academy Grad Awards for the MSc Design Innovation-Food, and successfully winning over €800k funding to set up the Maynooth Innovation lab (Mi:LAB) as part of the HEA's 'Innovation and transformation' call 2018. There was an increase from the previous year in publications and conference presentations, as well as industry workshops and external committee activity at a national

level. A core of three research academics have since been bolstered by three academics with doctorates.



Trevor Vaugh was the lead applicant for securing funding for Mi:Lab, which is currently working across the University to embed the mindset, skillset and toolsets of Design. A number of research projects are currently in progress, including: Widening participation to postgraduate studies and improving the recognition of prior learning process. No publications have come out of Mi:Lab at present, but abstracts have been submitted to a large number of journals and conferences.

Vaugh was also the co-founder of WickED, a group of academics from University College Cork, Maynooth University and the University of Applied Sciences Krems, in Austria that are using the principles of "Design Thinking" (Brown, 2008) to analyse aspects of homelessness. Their studies are focused on long-term homelessness rather than the "new" homelessness that has arisen recently, due to increases in rents and forced evictions. WickED is therefore concerned with those who have been living on the streets for years, mostly men, who have complex issues arising from this, such as long-term unemployment, poverty, childhood abuse, alcohol and drug dependency, domestic violence and mental health problems. Many of these may have also spent time in prison and are dependent on hostels and charity to survive.

From the outset WickED have been closely engaged with Penny Dinners through discussion with its Director, Catriona Twomey, who has enthusiastically welcomed their participation in prison visits. During such visits she has introduced some of her clients, and agreed to be accompanied by members of WickED on her team "night run". In addition, the group's thinking on the role of prison and rehabilitation services has been guided by Colm Carey, Resettlement Coordinator with the Cork Prison Service. They are now working with the Minister Damien English, Department of Housing, to explore the possibility of embedding their findings into the Government's 'Housing First' initiative.

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Vaugh has also delivered keynotes on designing medical products (for which he has 11 patents pending in 2018-19) at Ireland's Health Research Board and HSE conferences, as well as two book chapters on the use of Design Thinking in sports' coaching.

Frank Devitt has used his considerable industry experience and entrepreneurial expertise to deliver a number of Design Thinking workshops and coaching seminars to Enterprise Ireland, IRDG, IDI, Horizon 2020 in Iceland and Greece, and at Department of Business and Innovation, Ireland. He also presented at conferences in Melbourne, Australia, the National Design Thinking Conference in Dublin, and Applied Materials Research Centre at Waterford Institute of Technology. He was a co-author of 'How Irish design consultancies align with Ireland's Innovation 2020 priorities: a preliminary study' published in *ITERATIONS Design Research and Practice Review*.

In early 2018 Martin Ryan was invited to be lead editor of Issue 7, *ITERATIONS Design Research and Practice Journal*. Ryan also co-authored three peer reviewed articles for the journal. *ITERATIONS* is Ireland's leading peer reviewed design journal, which is represented on the editorial board by All Irish Universities and 3rd level institutes with specialities in Design, receiving international and national submissions.

Finally, in June of 2019 Ryan presented a keynote address on Design Thinking at one of Ireland's pre-eminent industry gatherings. This is an annual event organised by the Industry Research Development Group (IRDG), one of the most active industry bodies representing over 200 R&D active organisations. The conference was hosted in Croke Park and marked its largest annual attendance to date with over 300 participants from leading indigenous and multinational organisations.

DEPARTMENT OF ECONOMICS FINANCE AND ACCOUNTING

In 2018 the Finance and Economics groups authored 16 publications which is a noteworthy performance. Amongst these are a paper by Dr Tom Flavin titled "*Are Banking Shocks Contagious: Evidence from the Eurozone*" published in the *Journal of Banking and Finance* and Dr Irene Mosca published "*The effect of retirement on cognition: Evidence from the Irish Marriage Bar*" in *Demography*. This former is ranked as the sixth best finance journal in the world, and the latter is the third best journal in the field of population studies and demography. There are 5 other publications in the 3*/4* "internationally excellent" journal bracket. These include two in *Economica*, two in the *Economics of Education Review*, one in the *Journal of the Royal Statistical Society*.

The accounting group comprises active researchers who sustain currency and relevance through continued professional experience,

engagement and scholarship related to their professional background and experience. Research streams include;

- > National Pensions Policy, Retirement Income Planning and Generational Renewal.
- > Management Accounting and Financial decision making in the Farming Community.
- > Public Participation in Tax Policy Development.
- > Small and Medium Accounting Practices.
- > Management Information Systems and Big Data.
- > Public Interest Accounting.

Researchers from the group engaged in a number of third-party research collaborations during 2018 including collaborations with Teagasc, The Pensions Policy Research Group (PPRG) and the Department of Employment Affairs and Social Protection. This included a joint funding proposal with Teagasc to the Department of Agriculture, Food and the Marine on "*Developing and nurturing generational renewal across the farm business cycle: a farm management perspective*" and, as part of the PPRG, organizing workshops on proposed reforms to the State Pensions system for civil society organizations including Citizens Information, Women's Council, Mandate, Age Action, Tasc, Social Justice Ireland and Youth Council of Ireland. Following on from these workshops, submissions were made on the proposed reform measures to the Department of Employment Affairs and Social Protection. The group was part of a Department tender for a consultancy project with the National Ploughing Association.



Dr Fabrice Rousseau, Professor Donal O'Neill, Dr Bridget Mc Nally, and Ms Aodhain Casey received a Teaching and Learning Fellowship Award

A Departmental team comprising members from all three disciplines were awarded a Teaching and Learning Fellowship by the University as part of the 2018/2019 Teaching and Learning Fellowship awards for its research project titled "*Evaluating the use of eLearning for undergraduate and executive teaching at Maynooth University*".

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Members from all disciplines presented frequently this year at both national and international conferences.

ENGAGEMENT AND ENGAGED RESEARCH

1. Aedin Doris, Donal O'Neill, and Olive Sweetman

- Meeting with Jackie Harrington, Principal Officer in the Department of Employment Affairs and Social Protection and her staff to discuss the results from the final published version of the research project: *"Does Reducing Unemployment Benefits During a Recession Reduce Youth Unemployment? Evidence from a 50% Cut in Unemployment Assistance"*.
- Non-technical brief of the research above for the DEASP for inclusion in the final draft to be presented to Minister Regina Doherty.
- Newspaper coverage of research project: *"Good Schools or Good Students? The Importance of Selectivity for School Rankings"*.
- 'The Best School for Your Child? New Irish Research has News for Parents', Irish Times (article by Cliff Taylor), July 11, 2019.

2. Aedin Doris

- Interview in Drivetime, RTÉ Radio 1, August 20, 2019 on the research project on *"Good Students or Good Schools?"*.

3. Donal O'Neill

- Appointed external expert reviewer on DCU Business School Faculty Review Panel for promotion to Associate Professor (2018).
- Served as member of the inaugural CSO/Irish Economics Association Data Access Working Group. The CSO and IEA Data Access Working Group plays an important role as a forum where CSO and IEA can assess issues relating to researcher access to microdata.
- In December 2018 appointed to serve on the European Commission Structural Reform Support Service External Panel of Experts supporting the implementation of structural reforms in Member States in the areas of Labour market and social cohesion, the Welfare system, Education and Training (2018-2022). The SRSS uses the support of the Expert Panel to provide the technical support to beneficiaries in EU Member States.

4. Aodhdin Casey

- Maynooth University representative on Irish Accounting and Finance Association.

5. Bridget Mc Nally

- Member of Pension Policy Research Group (PPRG) and European Network for Research on Supplementary Pensions

(ENRSP). Engaged as part of PPRG in organising workshops with Civil Society Organizations on Government proposals for pension reform and in making a submission to the Department of Employment Affairs and Social Protection on its consultative document on Auto-enrolment.

DEPARTMENT OF EDUCATION

The Department of Education continues to contribute to scholarship and research in education, educational policy, engaged research, pedagogical innovation, and curriculum development. The department has 15.5 academic staff, 27 PhD students and 34 EDD students. The department celebrated the graduation of 4 PhD students and 1 MLitt student in 2018-2019.

One area of focus across a number of our funded European and national projects involves the practical and pedagogical questions of how to respond to and engage with difficult, contested and controversial issues. Learning to Disagree (2016-2019) (€379,320), an Erasmus+ funded project addressed the question of how to build and evaluate social and civic competences. Majella Dempsey and Anthony Malone were key members of this team. In 2019, Majella Dempsey was invited to contribute to the EU working group on Assessing Key Competences. A related project, led by Aislinn O'Donnell, was The Enquiring Classroom (2016-2018) (€209,953), another Erasmus+ funded project. This created a pedagogical handbook and offered a detailed conceptual framework to articulate the educational vision underpinning this project.

Building on this research expertise, Aislinn O'Donnell, Anthony Malone and Joe Oylar are members of the Maynooth team for the ISF-P Funded project awarded in 2019. EDURAD: Addressing Violent Radicalisation: A Multi-Actor Response through Education (2020-2022) (€739,156). Whereas education has been subjected to security and counter-terrorism agendas in responding to questions of violent radicalisation and extremism, this project seeks to develop educational responses and articulate the importance of educational spaces to discuss controversial and difficult issues. Joe Oylar's expertise in meta-cognitive reasoning, argumentation, and dialogic education will support the development of pedagogical tools that build in an evaluative dimension. An example of his publications in this area is with Reznitskaya, A. and I.A.G. Wilkinson (2018) 'Supporting teacher's spontaneous use of talk moves during inquiry dialogue'. Other key members of the Maynooth EDURAD Team are Claire Hamilton (Law) and Brian Melaugh (Applied Social Studies).

Rose Dolan and Conor Harrison are members of the Five Nations Network which works on citizenship and values education in Ireland, Northern Ireland, Wales, Scotland and England – a particularly important project in these times. Aislinn O'Donnell is a partner in Embracing Cultural Diversity in the Classroom (2018-2020).

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This project is funded by the Irish Human Rights and Equality Commission and Creative Ireland and is led by Chester Beatty Library. Thomas Walsh is part of a SCoTeNS team for a project entitled Contested Childhoods across Borders and Boundaries: A North-South Comparative Study. A related project output is his book chapter (2018) 'Concepts of children and childhood from an educational perspective 1900 – 1940: Context, curriculum and experiences'. Majella Dempsey is a member of the scientific research network Public pedagogy and sustainability challenges with Professor Carl Anders Säfström (CPEP) hosting a network event in November 2018. Grace O'Grady leads the Centre for Narrative Enquiry and an example of her publications in this area is (2018) 'An entry into a creative, rhizomatic narrative inquiry into young people's identity construction' in *Irish Educational Studies*.

Bernie Grummell continues to lead research on inclusion and social justice. An example of this is her project with Meliosa Bracken and Conor McGrath on Inclusion of People with Intellectual Disability in Adult Literacy Services (2018-2019), funded by National Adult Literacy Agency (NALA) in association with SOLAS and ETBI. With Morag Munro and Margaret Keane, CTL and MU students union, and partners in UCC and DCU, she is involved in the Disciplines Inquiring into Societal Challenges (DISCs) project to address social justice of gender, cultural diversity and community in higher education.

Another area in which the Department of Education is playing a leading role is in well-being and education and in positive education. Catriona O'Toole's projects included working with collaborator Professor Venka Simoska (Aarhus University) on Well Being and the Purpose of Education, she has worked with Maynooth and international collaborators on a project Cochrane Systematic Review of the effects of school and preschool based mindfulness programmes on children's psychosocial and cognitive functioning and she has an ongoing research partnership with Kildare Children and Young People Service Committee and Kildare Youth Services. In 2019, Jolanta Burke completed a large scale study on the well-being of teachers and school leaders. She has been working with Paula Kinnarney in the field of educational leadership. Her recent publications include a book chapter (2019) "*Strength-based coaching - A positive psychology intervention*" and article "*Well-being in post-primary schools in Ireland: the assessment and contribution of character strengths*" in *Irish Educational Studies*.

As educators and researchers, engagement in curriculum development means mobilising research expertise to inform and shape national curricula and approaches to education. Celine Healy and Majella Dempsey provide their research expertise at both Junior and Senior Cycle and Zerrin Doganca Kucuk is continuing to build capacity in STEM. Majella chairs the Leaving Certificate Biology Development Group. Working with two SPUR students, Majella

Dempsey and Ann O'Shea adapted Lithner's (2008) Reasoning Framework to classify tasks for science on a funded project Task Classification and Development in Science and Mathematics (2018). Zerrin Doganca Kucuk is Project Supervisor in "*STEM Leader Teacher Career Development Program*" (2017-2019). This involves working with middle and high school mathematics and science teachers. One example of her publication output is with A. Sysel. (2018) "*Developing Seventh Grade Students*" Understanding of Complex Environmental Problems with Systems Tools and Representations: a Quasi-experimental Study in *Research in Science Education*.

Celine Healy has been a key player providing her expertise and research skills in curricular development in languages education in Ireland. She is a Language Expert Member of Foreign Languages Advisory Group (FLAG), Initial Teacher Education Expert Member of FLAG Post-Primary Sub-Group, Member of Steering Committee for Content and Language Integrated Learning (CLIL) through Gaeilge and Adviser and Researcher on DES Content and Language Integrated Learning through Modern Foreign Languages Pilot project. She is also Chairperson of Senior Cycle Modern Foreign Languages Development Group.

Rose Dolan is leading the Teacher Education strand of the EDD which is building professional capacity for research in this area. One example of her publication output in collaboration with Thomas Walsh (2019) was 'Changing identities and practices: transitioning from the role of supervisor to placement tutor in initial teacher education in Ireland'. *Professional Development in Education*, 45 (4):527-538. Reflecting on questions of teacher autonomy and educational leadership, Maija Salokangas published a number of articles in 2019 including one with W. Wermke and G. Harvey, 'Teachers' autonomy deconstructed: Irish and Finnish teachers' perceptions of decision-making and control' in the *European Educational Research Journal*.



Mr John McCormack (principal, Árdcoil na Tríonoide, Athy), Ms Maria Harney (Deputy Principal, Loreto Secondary School, Navan), Ms Angela Rickard and Dr Thomas Walsh

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In 2018, Angela Rickard and Thomas Walsh received Teaching Council John Coolahan Research Support Framework funding to collaborate with two post-primary schools to develop understandings of and engagement with team teaching. The research will produce and disseminate a toolkit of resources and materials to support team teaching in post-primary schools in 2020. This builds on an earlier research collaboration between the MU Department of Education and the Professional Development Service for Teachers (PDST) supporting team teaching among student teachers and experienced teachers in partner schools.

Finally, Anthony Malone leads the DES Funded TL21 Project. This is an important initiative and exemplar of engaged research, building research capacity across the sector, a key national priority, in curriculum and pedagogy. The programme offers a workshop-based Continuing Professional Development programme for teachers and school leaders that promotes innovative practice and professional learning communities in post-primary schools.

DEPARTMENT OF ADULT AND COMMUNITY EDUCATION

2018 was a productive year for DACE in terms of research and a significant one in the bedding down of our medium-term research strategy drawn up two years ago. This strategy was collectively drawn in response to changes in the field and recommendations from the external reviewers in the Department Self-Assessment Report (2017). One of the key aims identified in this strategy is to ensure we continue to conduct the sort of grounded, practitioner relevant and praxis-orientated research that has been central to the Department and vital to its contribution to the field of adult education over the past forty years. This has taken many forms; most commonly concerned with adult education pedagogy and curricula, inclusive education, widening access and transformative learning. It is important to note that this type of engaged research has its own specific modalities not least that we listen and present our research to valued partners in ways that is meaningful for them. The rhythm and form of this research work does not always follow traditional academic patterns or result in typical research outputs. We wish to highlight some of the key work of this sort below but before we do so it is worth noting the extent of this work. We can conservatively identify 25 research presentations distinct from the organizational and administrative meetings related to this work in 2018 (for a sense of the range of bodies involved see also section below on engagement).

At the same time, we are also consciously seeking to consolidate and expand our international reputation as a leading centre of critical research on adult education and learning (particularly for our expertise on participative research methodologies, critical pedagogy, community education, transformative learning and access). This type of activity has been a secondary focus for DACE

in the past. We now want to strike a 'balance' between these aims but also ensure these distinct types of research are approached as complementary activities. Our strategy has been drawn up in light of the University's goal to be recognised as playing a leading international role and being the clear national leader in areas of research that address the major societal challenges of the 21st century.

To advance these aims we have put significant effort into the reorganisation of CRALE with seven staff events and four public events in 2018 which have brought a wide range of national and international community and adult education practitioners, policy actors, community representative groups, academic and research groups to Maynooth to share practice, engage in collaborations and dialogue, professional learning, policy discussions and transformative actions. The work of CRALE has been very helpful in finding that balance and beginning to document the full extent of our research efforts. This includes profiling the doctoral research activities in the department with 17 doctoral students presenting their research in the annual CRALE postgraduate forum in Feb 2018.

SUSTAINING PARTNERSHIP THROUGH ENGAGED RESEARCH



In 2018 the department won a research contract from AONTAS (the national adult education organisation) for mixed a study which mapped changes in community education. This was completed. A grant won in late 2017 explored how 'learners' voices' can be most effectively used to inform policy development in Irish adult education was also completed in 2018. Both projects entailed multiple meetings with policymakers and practitioners across Ireland including SOLAS (the statutory body responsible for adult and further education) and staff from the HEA and Educational and Training Boards as well as other scholars from the UK, Holland and Ireland. As is typical with such research, when it is effective, this is an ongoing work and has had a ripple effect (in the case of the learner voice study it had an impact on policy debate and

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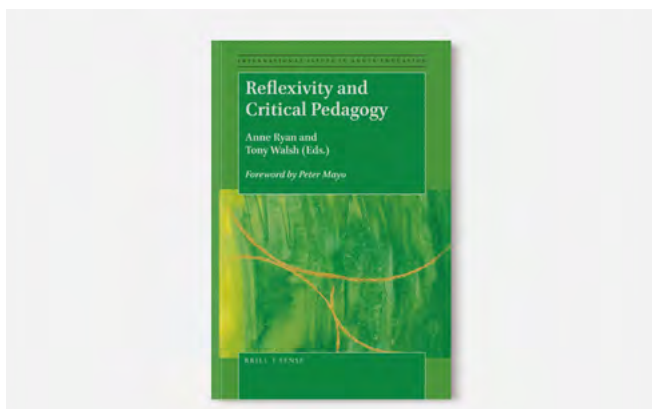
the development of countrywide participatory research and the project on community education in terms of the visibility of DACE to committed practitioners).

Staff were involved in 8 presentations to policymakers and the public drawing on our research as it pertains to the PATH programme funded by the HEA. The PATH programme is to support increased diversity in Initial Teacher Education (ITE).

The Department has collaborated with the HSE/Sexual Health and Crisis Pregnancy Programme in designing and delivering a series of Masterclasses based on our research on managing the challenges that present around unplanned pregnancy in the light of imminent new legislation. This entailed a total of 8 workshops attended by 160 professionals drawn from various medical, social care, psychological and educational contexts.

Some of our engaged research took the form of public scholarly dissemination. For example, we also held two seminars for staff and students in Carlow IT on our research on access to higher education. DACE also presented at a public seminar held by Queens University, Belfast on social class (held in a public library). This also took the form of an input (Adult Education can shape and promote equality) on RTÉ Brainstorm. Four members of staff were invited to participate in a series of lectures (7) in The School of Psychotherapy, UCD on narrative methods and biographical research. Invitations of this sort are a mark of the esteem of our peers and colleagues and our reputation for work on equality and education.

CONSOLIDATING AND EXPANDING OUR INTERNATIONAL REPUTATION



Reflexivity and Critical Pedagogy was published by SENSE/BRILL

A key event in 2018 was the publication by SENSE/BRILL, one of the leading international publishers in adult education research, of Reflexivity and Critical Pedagogy. The book harvests ideas and practices developed in the department over a long period

and was put together to bring this to a wider audience. It is significant because it is linked to engaged research but also ensures international scholarly recognition. For that reason, we have chosen to produce several other books with international publishers in recent years and we will continue to pursue this strategy in 2019-2020. This shift in how we publish our work has borne fruit in recent years in terms of increased number of keynote and research collaboration invitations. Beside the book we published four other book chapters including a chapter commissioned and translated by a Portuguese publisher and inclusion in a bi-lingual collection by a German publishing house.

Besides this we presented 15 papers at academic conferences, 3 of which were published. It is worth noting that most of these presentations were at key international academic conferences in the field of adult education on the themes of popular education (University of Capetown, Linkoping, Sweden) and transformative learning (in Milan Bicocca, and Teachers College Columbia New York). The event in Sweden was co-organised by a staff member and DACE were involved in the organising group/scientific committee/awards committee for three of these conferences. One also served in the more general capacity as the vice-chair the European Society for Research on the Education of Adults (ESREA is the most significant academic organisation in European adult education). Staff also organised an international summer school on Advocacy and adult education run in collaboration with AONTAS.

A large-scale three-year project on Inclusive Learning Erasmus + Unlocking Freedom through Adult Education was finished in 2018 leading to multiple forms of dissemination relevant to practitioners and policymakers. These outputs and engagements included a research report to EU, a European level policy paper, a continuous professional development programme and guidelines and a report on de-institutionalisation across Europe.

The HE4U2 Cultural Inclusion in Higher Education held several events in 2018. This project lead by EUCEN in association with 7 European Partners including Maynooth University published a policy paper on cultural inclusion in European higher education, a research report, a presentation to the EU Commission in Brussels, and an international conference in France during this year with departmental members presenting at the latter two events.

On a national level a staff member and chair of the Higher Education Lifelong Learning Ireland Network organised a conference in November in Maynooth for this network which attracted 100 participants from across Irish higher education and policy, quality and accreditation bodies.

All staff are active in peer review work and one member sits on the editorial board of the key journal in Irish adult education The

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Adult Learner and another served as editor of the international Journal of Transformative Education (SAGE).

The department has a strong track record in securing European research awards and again in 2018 we won an award through Erasmus +. Three other proposals were also funded (this includes the AONTAS one mentioned above) and amounts to €109,958. To achieve this staff put together 12 applications for research funding for projects on adult education equality, employability and access in 2018. For the second time in the past four years we submitted a Horizon bid and the Department is actively seeking an award of this type to fund doctoral and post-doctoral research to further our research strategy. Microsoft Ireland awarded €25,000 for a research project: Dream Space.

As befits a department with a strong interdisciplinary focus staff also contributed to national and international conferences and networks related to sociology, guidance and counselling and psychoanalysis. One member of staff was also heavily involved in organising the international conference Marx at Maynooth: Haunting the Future in 2018 as part of the decade of commemoration events. This was organised as an inter-departmental collaboration with organisers also from Sociology, Anthropology and English. This included high-profile speakers and attracted two hundred participants.

ENGAGEMENT AND ENGAGED RESEARCH

This aspect of our work is highly developed and well-established.

- > The PATH programme is to support increased diversity in Initial Teacher Education (ITE). In 2018 this entailed consultation and presentations to local area partnerships, networks of DEIS primary and second level schools, the FE sector, the DES, an Roinn Cultúir, Oidhreacht agus Gaeltachta, An Chomhairle um Oideachas Gaeltachta & Gaelscolaíochta, the Teaching Council of Ireland, Traveller organisations, One Family and others.



- > A seminar on research based pedagogy was held for staff of Wexford and Wicklow Education and Training Board (ETB) and another was held in Dublin Adult Learning Centre on Lifelong learning.
- > Multiple consultative meetings and research presentation meeting were held in 2018 related to the Unlocking Freedom through Adult Education project with ETBI National Advisory Committee, ETB and community education providers, disability support agencies, disability rights groups, higher and further education providers in Maynooth and Galway about inclusion of learners with intellectual disabilities in adult and community education. International partners from France, Bulgaria and Finland were also involved in the final conference which was launched by the Minister for State for Disability Issues.
- > Involvement with the European Agenda for Adult Learning: Increasing Pathways, Increasing Participation (2017 - 2019) on project advisory group.
- > At a university level two staff presented at the MUSSI research showcase and 3 staff participated in three seminars on professional doctorates held in MU including the Dean of Graduate Studies Symposium.
- > MA Leadership, Management and Defence Studies new course programme development in conjunction with the Dept of History and the Irish Defence Forces required consultation with Dublin Fire Brigade, Bord Gais Networks, Irish Air Corps, National Learning Network, and Emergency Services Training Institute for delivery of in house programmes in training and development.
- > The Community is a three-way partnership between Maynooth University (MU); community based organisations in the form of Local Development Companies and Local LEADER Partnership Companies; and the Public Library Service aimed at connecting with 'hard to reach' target groups and those most distant from the Higher Education system by running accessible and stimulating courses in local libraries.
- > Staff from DACE were involved in the consultative workshops in Dublin 15 with local community and policy actors, and gave a research presentation to the Irish Human Rights and Equality Commission in 2018 for the Embracing Diversity (2017-2018) research which examined experiences of diversity, and supporting mutual understanding and dialogue between People of African Descent (PAD) and service providers in the Dublin 15 area.
- > Sustained engagement and formal consultation on adult education was given to Dublin North East Local Drug and Alcohol Taskforce; the County Kildare LEADER Partnership; Northside Partnership, South City Partnership, Ballyfermot Partnership, Dublin City Council Libraries social inclusion section, IUA Campus Engage.

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FROEBEL DEPARTMENT OF PRIMARY AND EARLY CHILDHOOD EDUCATION

The Froebel Department currently hosts 22.5 academic staff and is currently developing their research programmes. In 2018 published 3 books, 7 book chapters, 7 referred journal articles and 13 other publications. The staff were also involved in many conferences with 1 conference publication and 33 individual conference contributions.

The Department launched a new Masters Programme in Research in Education in 2018 and the first cohort graduated in 2019. As part of the Department's Research Strategy, we have commenced a Doctoral Working Group with plans to commence a doctoral degree in the near future.

ENGAGED RESEARCH

- > Kiely, J. O'Toole, L. Haals-Brosnan, M., O'Brien, E. Z., O'Keeffe, C. and Dunne, C. (2019). *Parental Involvement, Engagement and Partnership in Children's Education during the Primary School Years: Final Report*. Dublin: National Council for Curriculum and Assessment / National Parents Council (www.mie.ie/en/research/parental_involvement_engagement_and_partnership_in_their_children%E2%80%99s_education_during_the_primary_school_years/parental_involvement_part_2.pdf).
- > O'Toole, L. THRIECE (Teaching for Holistic Relational and Inclusive Early Childhood Education) project – an Erasmus+ funded project with 10 partners across 3 European countries, Poland, Portugal and Ireland, and 3 educational levels, universities, primary schools and early childhood settings.

DEPARTMENT OF GEOGRAPHY

SUMMARY OF RESEARCH ACHIEVEMENTS

- > Dr Stephen McCarron brought to fruition nearly a decade's research in publishing the discovery of a formerly unrecognised multi-million-year-old glacially-derived sediment fan on the continental shelf to the west of Ireland.
- > At the 9/11 Memorial and Museum, New York City, Professor Karen Till gave the plenary lecture to the international conference on Relevance as a Transformative Force at Sites of Public Memory.
- > Dr Gerard McCarthy was awarded the Early Career Scientist medal by the International Association for the Physical Science of the Oceans in a year in which he was also lead researcher for a team awarded €2 million from the Marine Institute and the European Regional Development Fund for a project on Atlantic climate change.

- > Professor Mary Gilmartin was co-author of a book on migration and belonging in the age of Trump and Brexit.
- > Dr Conor Murphy and colleagues published a rainfall record for Ireland that covered more than three centuries and thereby established one of the longest continuous such records for any part of the world.

In 2018-19, geographers at Maynooth continued to pursue excellence in teaching, creativity in research, and diligence in service. With one book and 21 book chapters, publications for 2018 were at about the level of the previous year, albeit with an increase of 50% in the number of refereed articles (up to 82 from 54 in the previous year). In 2018-19, 44 grant applications were at about the level of the previous year and likewise the number awarded (17), yet the amount secured more than doubled, amounting to a little under €4 million. Our research training remained significant and five students were successful in their doctoral studies (4 in 2018-19). There was a significant increase in our postdoctoral complement (up to 8 from 3 in the previous year).

Recent appointments added greatly to our impact. Dr Lisa Orme published in *Nature Climate Change* (ranked #2 of 251 in Environmental Sciences and #1 of 86 in Meteorology and Atmospheric Sciences, Web of Science) and in *Quaternary Science Reviews* (ranked #5 of 50 in Physical Geography, Web of Science). Dr Helen Shaw secured a grant for work with the Peatlands Council as part of the Peatlands Community Engagement Scheme. Dr Conor Cahalane published in the *International Journal of Remote Sensing* (ranked #14 of 30 in Remote Sensing, Web of Science). Dr Gerard McCarthy brought about €1.3 million to Maynooth for his research on the role of oceans in climate change. This work also appeared in six articles (including a joint article with our own Professor Peter Thorne for *Nature*) and it prompted the International Association for the Physical Science of the Oceans to make Gerard their Early Career Scientist for 2019.

The engagement of Professor Peter Thorne with the Intergovernmental Panel on Climate Change continued and the flourishing of Climate Change research at Maynooth owes much to these international connections. In 2018 Professor Thorne held three European grants in this area. In addition to contributions to the developing research activity of the IPCC, Professor Thorne also published in leading academic journals: *International Journal of Climatology* and *Journal of Geophysical Research-Atmospheres* (ranked respectively #18 and #17 of 86 in Meteorology and Atmospheric Sciences, Web of Science). His international standing is evident also in how extensively his work is cited (just under 3,000 times in 2018 alone, Google Scholar). From his own grant-funded research Dr Rowan Fealy also published in the *International Journal of Climatology*, and in three other journals. Dr Conor Murphy received six research grants and published six

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articles with collaborators, including in the *Bulletin of the American Meteorological Society* (ranked #3 of 86 in Meteorology and Atmospheric Sciences, Web of Science). Several of these articles related to a data recovery project conducted with undergraduates that yielded the first 300-year rainfall record for Ireland and thereby one of the longest continuous series for any part of the world. This data set has already yielded further research including the finding that, in Ireland, the past decade has been the wettest for the past three centuries.

In some years, a particular field of research achieves a particularly significant research breakthrough. After many sea voyages and the collation of stratigraphic data from many sites, Dr Stephen McCarron was able in 2018 to publish his finding that there was a significant glacially-derived depositional fan on the coastal shelf to the west of Ireland (in *Marine Geology*, ranked #7 of 66 in Oceanography, Web of Science). This is now established as the most southerly such feature for Europe and it requires a re-evaluation of existing accounts of Europe's most recent glaciation. Similarly innovative, Dr Alistair Fraser not only published work in a leading geography journal (*Annals of the Association of American Geographers*, ranked #17 of 83 in Geography, Web of Science) on the geopolitics of a sugar tax, but also pioneered work on how information and communications technologies allow novel forms of governance in agriculture with an article on the relations between land grabs and data grabs published in the *Journal of Peasant Studies* (ranked #1 of 90 in Anthropology, Web of Science). Alistair's work develops for rural settings some of the insights that Professor Rob Kitchin and co-workers have continued pursuing in their work on The Programmable City and on Smart Cities. Supplementing the two edited books of 2017, this team produced two further edited collections in 2018 and Rob himself contributed to half a dozen articles and nine book chapters. Professor Kitchin's research was cited more than 3,000 times in 2018 (Google Scholar) and the international standing of his work is attested also by the steady flow of international visitors he attracts to Maynooth for longer or shorter collaborations.



Professor Mary Gilmartin co-wrote *Borders, mobility and belonging in the era of Brexit and Trump*

Academic year 2018-9 saw Professor Mary Gilmartin give her inaugural lecture on 'Placing Migration: the challenge of belonging in a precarious World.' This research also informed the book Mary co-wrote on *Borders, mobility and belonging in the era of Brexit and Trump* and the Irish Research Council Postdoctoral award that brings Dr Malene Jacobson to Maynooth to work with Mary. In terms of international impact, the work of Dr Martin Charlton and Professor Chris Brunsdon is particularly noteworthy. Dr Charlton's work was cited some 1,749 times and Professor Brunsdon's 1,973 times in 2018 (Google Scholar). Between them (and most often in collaboration) they had ten articles in 2018 including in such leading journals as *Progress in Human Geography* and the *Annals of the Association of American Geographers* (ranked respectively #3 and #17 of 83 in Geography, Web of Science). Their work on the statistical techniques of spatial analysis also provides expert support to a lot more research of postgraduates and staff than their names appear on. Spatial analysis was also taken up in the work of Dr Chris van Egeraat who, reflecting on his work in helping develop Ireland's regional policy, published two articles on the geography of the Irish economy. In one article, Dr Ronan Foley continued his work examining the use of health data from the Irish census, while a pair of book chapters developed further his widely-cited work on therapeutic landscapes (the book of 2017 has 87 citations to date, Google Scholar) and on the healthfulness of blue spaces (one 2015 article on blue spaces has already been cited more than 100 times, Google Scholar).

With its interdisciplinary reach, its engagement with civil society, and its stimulus to collaborative publication, the research in Art and Geography is a distinctive and provocative strand of geographical study at Maynooth. Professor Karen Till's international standing is shown by the citations of her work (318 in 2018, Google Scholar), by the international discussions of her work (as in an interview in the social science journal, *disClosure*), by the invitations to give plenary lectures (including at a conference on memory and museums held at the 9/11 Memorial Centre in New York), and by the grants from research councils and civil society partners that support her research (in 2018-19, the Irish Research Council, Glencree Peace and Reconciliation Centre, and Dublin City Council). Professor Gerry Kearns also publishes and researches in this area and his publications include an article in a special issue of *The Irish Review*, for which Professor Till was a co-editor and in which she herself published two articles. In collaboration with Dr Conor Murphy, Professor Till curated a series of events across campus for GeoWeek in November 2018, including exhibitions and lectures around the theme of Citizen Science and Weather Watchers. Publications from these ventures and further research initiatives have followed in subsequent years.

Presentations at national and international conferences are an important part of the obligation to disseminate our research. Some 46 conference papers were reported by staff for 2018-19. The

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visibility of Maynooth Geography extends beyond the full-time teaching staff and postdoctoral researchers to the conference presentations and publications of our graduate students, as well as of our emeritus colleagues. At the Conference of Irish Geographers hosted in May 2019 by the National University of Ireland Galway, there were 21 papers given by staff or postdoctoral researchers from Maynooth, but 31 given by our graduate students, mainly doctoral candidates but including also some Masters students reporting on publishable research. This synergy between teaching and research is also evident in the fact that of the five doctoral students who completed their degrees in 2018, two had previously been undergraduates in the Department and two more had completed Masters Degrees in the Department. Finally, I should note that the academic year 2018-19 also saw one of our recent hires depart for another Irish university. The loss of Professor Kath Browne in this way was a significant blow to our research in Human Geography as is evident both above and below.

EXTERNAL ENGAGED RESEARCH

> International Research bodies

During the academic year 2018-19, many colleagues researched in partnership with external stakeholders. The most prestigious of these international links was the work of Professor Peter Thorne in his role as Coordinating Lead Author for the sixth assessment report cycle of the Intergovernmental Panel on Climate Change. This is the most senior position in this international research body ever to be held by an Irish scientist. Professor Thorne was also a member of the European Space Science Council Working Group on Calibration/Validation and of the Global Climate Observing System (GCOS) Atmospheric Observations Panel for Climate. He was chair of the GCOS Working Group on GCOS Reference Upper Air Network.

> Community partnership projects

Several staff and graduate students have community stakeholders as part of their research team, including Professor Karen Till and Professor Gerry Kearns who were part of the research committee of Dublin Bay North Repeal through which Masters students were trained in questionnaire design and interviewing while also producing research that is now being used in publications by staff and graduate students. Working with a series of local partners including NGOs and local authority organisations, Dr Alistair Fraser curated a second Festival of Food Sovereignty at Maynooth. These collaborations are now part of new research proposals.

> Consultancy reports

Professor Mary Gilmartin worked with Dr Jennifer Dagg, a postdoctoral researcher at Maynooth University Social Science Institute, and in collaboration with community organisations, to investigate some of the barriers to the successful integration of migrants into Irish society. Their report, *Measuring migrant integration in Ireland*, was published as a Working Paper from MUSSI and was reported on in national media, including the *Irish*

Times. From Professor Karen Till, Dublin City Council Culture Company commissioned a report on its programme facilitating connections between cultural and neighbourhood institutions across Dublin, and Dr Rachel McArdle, recently graduated from our doctoral programme, undertook a geographical inventory of these connections and their consequences, producing *Research Report 1: Overview of Tea and Chats*.

> Partnerships with civic bodies

Dr Conor Cahalane continues his collaboration with Ordnance Survey Ireland looking at ways for automating map updates via high resolution aerial imagery and satellite data. Dr Chris van Egeraat works regularly with local authorities advising on local economic development. Professor Karen Till began a collaboration with Pavee Point Traveller and Roma Centre around the development of memory maps and this has spawned joint work between Pavee Point and a group of Masters students in Spatial Justice and in Geographical Information Science at Maynooth.

> Enterprise partnerships

During academic year 2018-19, there were two doctoral students funded from enterprise partnerships. Professor Karen Till supervised Joe Robinson who was funded jointly by the Irish Research Council and the Glencree Peace and Reconciliation Centre. Dr Conor Murphy supervised Ciara Ryan on the basis of funding from the Irish Research Council and Met Éireann. The research has already produced publications and is central to the data-recovery project that has given Irish researchers one of the longest run of rainfall data available for any country.

OTHER RESEARCH ACHIEVEMENTS



Dr Gerard McCarthy named Early Career Scientist for 2019

> Research related prizes

The most important award achieved by geographers at Maynooth in the academic year 2018-19 was the choice by the International Association for the Physical Science of the Oceans to name Dr Gerard McCarthy their Early Career Scientist for 2019. At

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Maynooth University's second annual research awards, Dr Gerard McCarthy and Professor Kath Browne were respectively placed first in the Faculty of Social Sciences as early-career researcher and as researcher of the year respectively. In 2018, Dr Adrian Kavanagh was elected President of the Geographical Society of Ireland for a two-year period, bringing honour and visibility to Maynooth Geography.

> Conferences hosted

The major Earth Sciences conference in Ireland for many years was the meeting of nearly 3,000 scholars convened at the Convention Centre, Dublin, by the International Union for Quaternary Research. It was chaired by a geographer, Professor Peter Coxon of Trinity College, and a host of geographers were involved including our own Dr Stephen McCarron who organized two field trips, wrote one field guide, and did the editorial and production work for the whole series of field guides that now remain as a major legacy of the event. The major Geography conference in Ireland during that academic year was the EUGEO meeting at NUI Galway. Of the 100 sessions, 15 were convened by colleagues at Maynooth.

> Visiting fellowships

Staff both attract and are invited to take up visiting fellowships. In academic year 2018-19, Professor Mary Gilmartin gave the Annual Harrison and Eva Lewis Bailey Alumni Lecture to the Department of Geography at the University of Kentucky.

> Journals edited

Some half-dozen journals were edited by staff and in this academic year, Dr Alistair Fraser was appointed European editor for *Human Geography*, a journal of radical and critical scholarship.

> Events held

The Department held a fortnightly seminar series and our colleagues in ICARUS supplemented this with their own seminar series. Several research groups held their own short meetings including the Electoral Geography Group that has Dr Adrian Kavanagh and a trio of graduate students at its core.

> Collaborations

Professor Karen Till has developed an influential network for collaborations between artists and academics as the Space and Place Collaborative Network. This sustained many events including exhibitions in Galway and Maynooth. Professor Rob Kitchin hosted many events and edited several collections based on collaborations between software engineers and social science academics as part of his Programmable City project.

> Contributions towards public policy etc.

Having already served as expert adviser to the Citizens' Assembly on Climate Change, Professor Peter Thorne was appointed advisor to the group charged with deliberating on how to implement the recommendations of the Assembly, the Oireachtas Committee on Climate Change. Dr Conor Murphy and Dr Gerard

McCarthy were also engaged with this. Dr Adrian Kavanagh maintained the most widely trusted blog on candidates, constituencies, and polling data for Irish local and national elections. Staff noted with interest the development of new fora for public debate and some eight colleagues have already placed research into the RTÉ Brainstorm series with very welcome attention to our work as a result.

INTERNATIONAL DEVELOPMENT

The Department of International Development was established in 2018 from the Kimmage Development Studies Centre and hosts 5 academic staff. The staff contributed to research and publications publishing 1 book and 1 book chapter, 2 referred journal articles and 10 other publications. The most notable contributions in the areas of sustainable development and development education. This included the publication of a manual: 'The Sustainable Development Toolbox' by Niamh Rooney and a seminar contribution by Tom Campbell: 'Climate Change Policies and Pastoralist Predicaments in the Horn of Africa: Has the Pastoralist Narrative Really Changed?' In development education, Dr Eilish Dillon published two peer reviewed articles in Development Education Journals in Ireland and the UK: 'Critical History Matters: Understanding Development Education in Ireland Today through the Lens of the Past' in Policy and Practice, A Development Education Review and 'How Critical is the Global? Discursive Shifts in Development Education in Ireland' in the International Journal of Development Education and Global Learning. In addition, she contributed keynote addresses at two seminars/conferences on the findings from her Doctoral research. One of these was at a conference organised by Dr Eilish Dillon and hosted at Kimmage DSC immediately prior to the transfer to Maynooth on Development Education in Ireland.

DEPARTMENT OF ANTHROPOLOGY

PUBLICATIONS



Dr Pauline Garvey published ground-breaking book on IKEA

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In 2018, members of the Department of Anthropology authored 19 publications and participated in 21 conferences. The most notable publication achievements include Dr Pauline Garvey's ethnographic monograph, *Unpacking IKEA: Swedish Design for the Purchasing Masses* (Routledge) and Dr Mark Maguire's co-edited volume (with M. U. Rao and N. Zurawski) *Bodies as Evidence: Security, Knowledge and Power* (Duke University Press). Dr Maguire also authored a chapter on airport security in the *Routledge Handbook of Anthropology and the City*, while Dr Thomas Strong's entries appeared in the *International Encyclopaedia of Anthropology* (J. Wiley & Sons). Dr Jamie Saris participated in a medical anthropology debate in the prestigious *Postgrad Medical Journal* with an entry, "On patients, doctors and ethnographers" and his articles on epilepsy and patient-healthcare partnership received significant attention in the discussions on Ireland's healthcare transformation. Professor David Prendergast's work on technology and aging were published in impacted international conferences proceedings and his most recent book, *Ageing and the Digital Life Course* was named a CHOICE 'Outstanding Academic Title' by the American Library Association and was described as one of 'the two most fascinating books on aging in the 21st Century' by the Huffington Post. Dr Chandana Mathur was a guest co-editor of the special issue of *Dialectical Anthropology*, entitled the Making of the US Working Class and Dr Abdullahi El-Tom's monograph, *Study War No More: Military Tactics of a Sudanese Rebel Movement*, came out in the Arabic translation at an important moment in the Sudanese struggle for democracy (Alward Publishers). Other publications by department staff appeared in peer-reviewed journals, including *Dialectical Anthropology*, *Anuac: Rivista dell'Associazione Nazionale Universitaria Antropologi Culturali*, *The Journal of Development Studies*, *Wiley Interdisciplinary Review Essays on Water (WIRES Water)*, and the *Irish Journal of Anthropology*. It should be noted that members of the anthropology department are editors and active editorial board members of international peer-reviewed journals, including *Social Anthropology*, *American Anthropologist*, *Dialectical Anthropology*, *Urbanities*, *Journal of Urban Ethnography*, *Home Cultures: The Journal of Architecture, Design and Domestic Space*, *Nordic Journal of Social Research*, *sapiens.org*, *European Journal for Research on the Education and Learning of Adults*, and *Journal for Critical Education Policy Studies*.

RESEARCH

As a PI in the EU Horizon 2020/ ERC Advanced Grant, Smartphones, Smart Ageing and mHealth (led by University College London), Dr Pauline Garvey has been conducting research on technology and ageing. Dr Garvey and her research partners concentrate on social prescribing – a fast-growing area in international initiatives aimed at supporting health through socially embedded solutions. This international ethnographic research project (total budget €2.5 million) employs a team of 11 anthropologists conducting simultaneous 16-month ethnographies in Ireland, Italy, Cameroon, Uganda, Brazil, Chile, Al-Quds,

China, and Japan and includes an important dimension of social engagement, such as the development of smart phone applications and websites. Professor David Prendergast serves as the Advisory Board Member for this project for which he also helps produce visual ethnography films.

Professor David Prendergast and Dr Jamie Saris are Co-PIs in the H2020 SHAPES Project, *Smart and Healthy Ageing through People Engaging in Supportive Systems*, which aims to create the first European open Ecosystem enabling the large-scale deployment of a broad range of digital solutions for supporting and extending healthy and independent living for older individuals who are facing permanently or temporarily reduced functionality and capabilities. This project, which includes 36 institutional partners and has a total funding value of €21 million, is led and coordinated by the Assisted Living & Learning Institute and involves co-PIs from 4 MU departments including Anthropology, Psychology, Law and Electronic Engineering.

Dr Saris is Anthropology Lead on the *Epilepsy Partnership in Care (E-PIC) Project*, a long-term ethnographic investigation of the Epilepsy Services in Ireland followed up by Participant-Action Research to help the services move towards a patient/person-centred service. Funded by the Health Research Board (HRB) Research Consortium for Quality and Patient Safety (€280,000, with €130,000 at MU), this project has resulted in multiple publication over the past few years, and is widely seen as a model for engaged research at the HSE. Dr Saris also continues to contribute to a long-term project with the RCSI, "Medical Professionalism in Practice - developing and understanding relationship-centred professionalism in medicine for the public, students, teachers and clinicians" [Med PIP].

Dr Strong's project, *Culture and Sexual Risk: An Ethnographic Analysis of Gay Male Sexual Worlds in Ireland Today*, received funding from the Irish Research Council COALESCE Research Fund (€98,040.00). Dr Strong's ethnographic research focuses on gay male sexuality in Ireland today, in light of the rising HIV diagnoses in the Republic. The project's output is geared toward the State and community actors impacting gay male sexual health. As a founding member of ACT UP Dublin, an HIV activist organisation, Dr Strong is a frequent consultant on sexual health initiatives. Most recently, he advised the Minister of Health on the design and messaging of Ireland's first national HIV stigma campaign.

Professor Hana Cervinkova completed a four-year H2020 MCS ITN project, *European Doctorate in Teacher Education* (2016-2019), focused on transformative teacher education in partnership with public schools in five European countries, in which she served as the national coordinator for Poland (total budget €3,472,320). In connection with the project, Professor Cervinkova organized a number of public events focused on promoting inclusive education in Poland, including conferences and workshops which engaged

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academics, teachers and school principals in critical discussions on educational diversity and social justice. In 2018-2019, Professor Cervinkova was the lead anthropologist in the project *KREAS - Creativity and Adaptability as Conditions for the Success of Europe in an Interrelated world*, Operational Programme Research, Development and Education (OP RDE), Excellent Research at the Faculty of Arts, Charles University, Prague, Czech Republic (total budget €95,517,906), focusing on the relationships between urban heritage and cultural identities in historical, political and socio-cultural contexts. Professor Cervinkova was also a research member in a country-wide action research project in the Czech Republic (led by the Department of Sociology, Andragogy and Cultural Anthropology, Faculty of Arts, Palacky University Olomouc), *KREATIVITA - Creative Partnership for Inclusive School*, funded by the European Union and the Czech Ministry of Education (total budget €1,745,000), supporting inclusive learning environments for minority children and youth through art programs in Czech schools.

Dr Chandana Mathur is PI in the social science work package (Lead PI: Professor Honor Fagan of Sociology) in PANI-Water: Photo-irradiation and Adsorption based Novel Innovations for Water Treatment funded under the Water for our Environment Economy and Society Horizon 2020 program (total budget: €4,969,749). The project aims to expand and confirm six prototypes that remove CECs and other pollutants from wastewater. She is also a PI for the WATERSPOUTT (Water -Sustainable Point-of-Use Treatment Technologies), again working with Professor Honor Fagan as Lead PI, funded under the Horizon 2020 Scheme 'Development of water supply and sanitation technology, systems and tools, and/or methodologies' (total budget: €3,084,351.25). Dr Mathur together with Dr Greg Acciaioli (University of Western Australia) was also awarded the prestigious International conference grant by the Wenner Gren Foundation for Anthropological Research, to support the July 2018 WCAA (World Council of Anthropological Associations) conference on the 'Global Survey of Anthropological Practice' project in Florianopolis, Brazil. Professor Rowena Pecchenino (Economics) and Dr Chandana Mathur were named expert contributors to the project InSPIREurope (Initiative to Support, Promote and Integrate Researchers at Risk in Europe), and awarded funding under the European Commission's Marie Skłodowska-Curie Actions and coordinated by Scholars at Risk – Europe (total budget €1,492,321.25).

As an active member of the COST Network on Comparative Analysis of Conspiracy Theories, Dr Elżbieta Drażkiewicz works on developing tools and strategies for schoolteachers, policymakers and social activists to deal with conspiracy theories in their practice. In 2019, she organized a workshop at MU, "Role of Social Sciences and Humanities in dealing with Conspiracy Theories" with the support of COST, MUSSI conference funding and MU Conference and Workshop Support Fund. Dr Drażkiewicz is also

involved in applied research focused on organizational analysis in partnership with Research for Health and Protection Surveillance Centre in Dublin (HPSC). In 2019, Dr Coleman became a member of ENTAN, the COST-funded European Non-Territorial Autonomy Network examining the concept of non-territorial autonomy (NTA). ENTAN particularly focuses on NTA arrangements for reducing inter-ethnic tensions within a state and on the accommodation of the needs of different communities while preventing calls to separate statehood.

CONFERENCES

Members of the department delivered invited keynote and plenary addresses at prestigious international venues and events. Dr Mark Maguire spoke on addressing anthropological approaches to counter-terrorism and security at five international conferences in Portugal, England, Sweden, Slovenia and Germany. Professor David Prendergast delivered fourteen invited lectures on aging, care, technologies, design and visual ethnography at conferences in the United Kingdom, Portugal and Ireland, including a keynote address at the annual conference of the Health Research Board. Professor Hana Cervinkova gave opening plenary lectures on inclusion and diversity at high-profile international conferences of the Association for Teacher Education in Europe (ATEE) and of the European Research Network About Parents in Education (ERNAPE). Dr Chandana Mathur was a keynote plenary and roundtable speaker at the IUAES Inter-Congress in Poznan, Poland and she gave public lectures at the École des Hautes Études en Sciences Sociales (EHESS), Centre Norbert Elias, Marseille, France. Dr Thomas Strong was an invited speaker at the conference on 'Queering Kinship' at the University of Helsinki, Finland.

Dr Abdullahi El-Tom has been engaged as an invited speaker and expert in the process of negotiating peaceful political transition in Sudan. He was the invited participant in four workshops on Sudan's economic reform priorities organised by Chatham House, Royal Institute for International Affairs-UK. He also attended the 41st session of the UN Human Rights Council in Geneva, Switzerland (July 2019) and a series of Consultative Group meetings in the Sudanese Peace Process organized in Addis Ababa by the African Union and the Institute of International Studies, Hague. Dr El-Tom was also the prime guest speaker to address the First Convention of the Sudanese Uprising Support Group in Ireland. His appearances and articles are widely available on the internet.

Professor David Prendergast co-organised (with Rob Kitchin and Brian Donnellan), Smart City Ethics Workshop with the four Dublin Local Authorities and Maynooth University. He also served as an Industry Advisor for the Smart Dublin Advisory Network and he was a member of the 2017-2018 Selection & Evaluation Panel for

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the Dublin City Council & Enterprise Ireland in the Small Business Innovation Research (SBIR) Awards (Gully Monitoring). Between 2011-2018, he was the Board Member at the Trinity Centre for Healthcare Practice and Innovation and the member of the Selection Panel at the Faculty of Health Sciences Dean's Research Initiative Fund at Trinity College Dublin.

As the President of the World Council of Anthropological Associations (WCAA), Dr Mathur organised the 2018 WCAA biennial meeting Florianopolis and is now a permanent member of the WCAA Advisory Board. Dr Mathur has served at expert group meetings for UNESCO and the European Commission and she holds the World Anthropologies seat for the American Anthropological Association's Members Programmatic Advisory and Advocacy Committee, and is a member of the Code of Conduct Working Group of the European Association of Social Anthropologists.

Dr Steve Coleman organised the Annual Conference of the Anthropological Association of Ireland, 27-28 September 2019 at MU and hosted a public workshop/roundtable discussion with Sean-nós (Traditional Irish-Language) singers.

Members of the Anthropology Department spoke on issues of public concern on media. Dr Chandana Mathur appeared on RTÉ Radio 1's The History Show hosted by Myles Dungan and she was interviewed on her environmental research in a podcast as part of a resource pack for Irish secondary school teachers. Dr Jamie Saris participated in the Public Panel Discussion on *Technology and Intimacy* at Science Gallery Ireland. Professor David Prendergast researched and co-created promotional films for community organisations Sona Sasta Meals on Wheels Service and Maynooth Men's Shed and an interview with him on "Mediating Between Technology and People in Smart City Transformations" by Tobias Brandt appeared in *Journal of Business Information Systems Engineering*.

AWARDS



Dr Chandana Mathur received the AAA Presidential Award

At the November 2018 American Anthropological Association Annual Meeting at San Jose, Dr Chandana Mathur received the prominent AAA Presidential Award for her leadership in uniting global anthropology under the World Anthropological Union (combining the World Council of Anthropological Associations and the International Union of Anthropological and Ethnological Sciences).

Dr Abdullahi El-Tom was awarded the 2019 AAI Award in acknowledgement of his contribution to the building of the Anthropological Association of Ireland (AAI). He also received an award 'Outstanding MAP Academic Advisor' from the MU Access office for his service to non-traditional students and students with special needs.

ENGAGED RESEARCH

Professor Hana Cervinkova was a research team member in a country-wide action research project, *KREATIVITA-Creative Partnership for Inclusive School*, funded by the European Union and the Czech Ministry of Education (total budget €1,745,000) supporting inclusive learning environment for minority children and youth through art programs in Czech schools.

Professor Hana Cervinkova completed a four-year H2020 MCS ITN project, *European Doctorate in Teacher Education (2016-2019)*, Horizon 2020 Framework Programme for Research and Innovation (total budget €3,472,320), in which she served as the national coordinator for Poland. The project focused on doctoral research in teacher education in partnership with public schools. In connection with the project, Professor Cervinkova organized a number of public events focused on promoting inclusive education in Poland, including conferences and workshops which engaged academics, teachers and school principal in critical discussions on educational diversity and social justice.

Professor Hana Cervinkova led (together with Dr Juliet D. Golden) annual semester-long multi-sited European study program in partnership with Syracuse University, *Negotiating Identities Across Europe's Borders*. This program, whose uniqueness was acknowledged by the Forum on Education Abroad through its prestigious 2016 Award for Excellence in Education Abroad Curriculum Design, builds on pedagogical approach that fuses educational anthropology and participatory action research. Students are engaged in making public the hidden and silenced memories of the formerly multicultural societies of Central European cities through a public website, *Urban Labs Central Europe* - www.urbanlabsce.eu.

Dr Elżbieta Drażkiewicz was a consultant for a project focused on organizational analysis in the area of team integration for Health and Protection Surveillance Centre in Dublin. The project was an outcome of the research partnership between Dr Drażkiewicz and

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HPSC and included final report and presentations of concrete implementation strategies.

Dr Drażkiewicz has also led a project examining how the decisions about the vaccinations are made on the level of the state, among health professionals and among patients, including parents. Focusing on the case of the HPV immunisation programme in Ireland, the project's overall objective is to understand how conflicts about vaccines are shaped and how they can be mitigated. Dr Drażkiewicz presented preliminary findings of this project at the Winter Scientific Meeting of the Faculty of Public Health. She also discussed her work with the stakeholders in Immunisation Office and Health Protection and Surveillance Centre in Dublin.

Dr Drażkiewicz has also been involved in the work of the Stakeholder Engagement and Education Committee in the COST Network Comparative Analysis of Conspiracy Theories. The purpose of this committee is to provide schoolteachers, policymakers and social activists with tools and strategies to deal with conspiracy theories in their work.

Dr Drażkiewicz has begun a project on the divestment process in Irish Education, asking how different stakeholders – families, state policymakers, Church representatives and private patron bodies – negotiate their vision of future Irish education system and how they envision the future of Ireland through that process. With her study, which examines bottom-up and state initiatives to divest from Catholic ownership in Irish Education, she is interested in how economic, cultural and political worlds converge in this timely process (www.rte.ie/eile/brainstorm/2018/0314/947298-learning-to-be-irish/).



Dr Abdullah El-Tom

Dr Abdullahi El-Tom has been deeply involved in Sudan's struggle for democracy. His engagement involved invited expert appearances at political negotiations for Sudan's peaceful transition. He was an invited participant in four workshops on

Sudan's economic reform priorities organised by Chatham House, Royal Institute for International Affairs-UK. He also attended the 41st session of the UN Human Rights Council in Geneva, Switzerland (July 2019) and a series of Consultative Group meetings in the Sudanese Peace Process organized in Addis Ababa by the African Union and the Institute of International Studies, Hague. Dr El-Tom was also the prime guest speaker to address the First Convention of the Sudanese Uprising Support Group in Ireland. His appearances and articles are widely available on the internet. He is currently working on a co-authored book (with Omer Gamer Eldin), *Life and History of El Fashir City, Darfur, Western Sudan (1800 -1956)*.

Dr Pauline Garvey is a PI in the EU Horizon 2020/ ERC Advanced Grant, *Smartphones, Smart Ageing and mHealth* (led by University College London). As a part of this project examining technology and ageing, Dr Garvey and her research partners concentrate on social prescribing – a fast-growing area in international initiatives aimed at supporting health through socially embedded solutions. This international ethnographic research project (total budget €2.5 million) includes an important dimension of social engagement, such as the development of smart phone applications and websites. Dr Garvey is currently writing co-authored monographs that will be published by University College London Press and freely downloadable on their dedicated website. The previous project led by Professor Miller (*Why We Post*) has had in the region of 840,000 book downloads so far. The project leaders are aiming to exceed this number in order to communicate to as wide an audience as possible that anthropology can make a unique contribution to issues surrounding health and well-being in the age of the smartphone.

Dr Chandana Mathur is a Principal Investigator for the WATERSPOUTT (Water - Sustainable Point-Of-Use Treatment Technologies) project led by the Royal College of Surgeons in Ireland, which has been awarded funding in the amount of €3,084,351.25 under the EU Horizon 2020 Scheme for the topic 'WATER-5c-2015 - Development of water supply and sanitation technology, systems and tools, and/or methodologies'. The MU based social science team (with Professor Honor Fagan as Lead PI) conducts research in collaboration with social scientists based at Mekelle University, Ethiopia; the University of Malawi; Stellenbosch University, South Africa; and Makerere University, Uganda and through these partners, with NGOs, schools and community organisations in the four countries. Regular shared dialogue workshops around community drinking water issues are a key component of this research project.

Dr Mathur is a PI for PANI-Water (Photo-irradiation and Adsorption based Novel Innovations for Water Treatment) project, which was awarded funding under the EU Horizon 2020 Scheme 'Water for our Environment, Economy and Society: SC5-12-2018: EU-India water

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cooperation'. She is again working with Professor Honor Fagan who is the MU-based Lead PI for the social science work package on a project concerned with water access for disadvantaged groups in India (total project budget: € 4,969,749). The project's research partners for the social science work package are not universities, but two prominent Indian NGOs – Development Alternatives (www.devalt.org/), and TARA, Technology and Action for Rural Advancement (www.tara.in/).

Dr Chandana Mathur together with Professor Rowena Pecchenino (Economics) were named expert contributors to the project InSPIREurope (Initiative to Support, Promote and Integrate Researchers at Risk in Europe), awarded funding under the European Commission's Marie Skłodowska-Curie Actions and coordinated by Scholars at Risk – Europe (total budget € 1,492,321.25). The grant enables a quintessentially engaged project, concerned with supporting and defending academic freedom and the human rights of scholars from around the world.

Professor David Prendergast carried out five photoshoots for Siel Bleu in 2018 – a non-profit organisation that provides chair bound exercise classes for older people in nursing homes, rehabilitation units and community groups. He developed 250 images for them and in 2019 funding was awarded to promote the charity using his image of a cancer survivor who went through a great deal during her journey back to health and fitness helped by Siel Bleu. This picture has been featured in most of the national media in the past year and in recent months can be found on 46 bus shelters, 26 digital pods in shopping centres and on 588 cards on the train and dart network.

Professor David Prendergast sat on the steering group to set the criteria for a €100,000 competition funded by the Environment Protection Agency and the Community Foundation for Ireland focused on Creating Sustainable Communities through the Circular Economy and Sustainable Consumption and Waste.

Professor David Prendergast worked with a range of MU stakeholders to initiate and coordinate an Age Friendly Maynooth programme.

Dr A Jamie Saris has been developing a research project with the Conversation Salon (conversationsalons.ie/), around interaction between strangers and social cohesion. He continues to engage with Epilepsy Ireland (www.epilepsy.ie/) around the HRB-funded Epilepsy Partnership in Care (E-PiC) project.

Dr Saris is a regular contributor to Tweet-chats (online discussion between experts on Twitter) run Healthcare Social Media, South Africa (#HCSMSA) on topics as diverse as access to HIV treatment and mental Health services in the Developing World. He appears regularly in intellectual discussions in front

of various publics in Ireland, most recently with the Science Gallery's extended exhibition on Technology and Intimacy, titled Are We Getting Close? (www.facebook.com/scigallerydub/videos/320785101892737/).

Dr Thomas Strong is leading the grant, Culture and Sexual Risk: An Ethnographic Analysis of Gay Male Sexual Worlds in Ireland Today, funded by the Irish Research Council COALESCE Research Fund (2019/125), Sexual Health and Crisis Pregnancy Programme research strand (€97,869.55). The project involves a close working relationship with the Sexual Health and Crisis Pregnancy Project (HSE), as well as other actors in the area of gay men's health, such as HIV Ireland, ACT UP Dublin, and so on.

DEPARTMENT OF LAW

The Law Department maintained its strong publication record in 2018. It is worth noting the very high number of Early Career Researchers in the Department (approx. 70% of staff members are 5-7 years post PhD).

In 2018, Noelle Higgins published her monograph, *Cultural Defences at the International Criminal Court*, as part of the Routledge Focus series. A number of other books (e.g. *Surveillance and the Law: Language, Power and Privacy*, *The Special Criminal Court: Practice and Procedure*, and *Capital Punishment in Independent Ireland: A Social, Legal and Political History*) were accepted for publication during this period and will be published in the next reporting phase.

In terms of articles, staff members published a number of contributions in leading international peer-reviewed journals, reflecting the strategy of targeting top, international journals in the field of law and criminology. These highly ranked journals included, inter alia:

- > the British Journal of Criminology (ranked 11th, JCR Journal Citations Report (JCR); Criminology and Penology; Q1 Scimago Journal Rank (SJR) SJR Arts and Humanities (Miscellaneous)).
- > Criminology and Criminal Justice (ranked 28th, JCR Criminology and Penology; Q1 SJR Law).
- > European Law Journal (ranked 37th, JCR Law; Q1 SJR Law).
- > Law and History Review (ranked 39th, JCR History; Q1 SJR History).
- > Philosophical Studies (Q1 SJR Philosophy).
- > Theoretical Criminology (ranked 18th, JCR Criminology and Penology; Q1 SJR Law).
- > Social History of Medicine (ranked 41st, JCR History; Q1 SJR History).

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Reflecting the mission of the Department to contribute to professional practice, as well as academia, staff members also produced important contributions aimed primarily at law practitioners and policy makers in Ireland and beyond (e.g. Commercial Law Practitioner, Criminal Law Review, Irish Journal of Family Law, Irish Probation Journal, Otago Law Review, Professional Negligence, Texas Law Review etc.).

Similarly, staff members made a number of important contributions to edited collections aimed at both domestic and international audiences (publishers include Brill, Clarus Press, Oxford University Press and Wolters Kluwer). Staff members have been invited to contribute to a number of highly influential texts, edited by some of most highly regarded legal scholars in the world (for example, Delia Ferri to *The UN Convention on the Rights of Persons with Disabilities in Practice: A Comparative Analysis of the Role of Courts*, co-edited by Professor Lisa Waddington and Professor Anna Lawson; David Mangan to *Game Changers in Labour Law: Shaping the Future of Work*, co-edited by Professor Frank Hendrickx and Professor Valerio de Stefano).

Others produced important works aimed primarily at undergraduate and postgraduate law students (for example, Clíodhna Murphy to *Legal Research Methods: Principles and Practicalities*, co-edited by Laura Cahillane and Jennifer Schweppe, and Fergus Ryan published a new edition of his student text, *Constitutional Law*).



Professor Delia Ferri co-edited *The EU Social Market Economy and the Law: Theoretical Perspectives and Practical Challenges for the EU*

Professor Delia Ferri also co-edited (with Fulvio Cortese) a book entitled, *The EU Social Market Economy and the Law: Theoretical Perspectives and Practical Challenges for the EU*, as part of the Routledge Research in EU Law Series, which featured contributions from Michael Doherty and doctoral student, Charles O'Sullivan. This book has been positively reviewed in *Common Market Law Review* and *Diritticomparati.it*.

Traditionally, research funding has not been hugely significant in legal scholarship (as such work was primarily doctrinal, library-based, and carried out on an individual basis), but the research culture in the department has changed notably in this regard over the last 18 months. In 2018/19, staff members demonstrated both the ambition, and ability, to compete for the most highly competitive and sought after awards.

Professor Delia Ferri secured €2million for her 'DANCING' project, a prestigious European Research Council Consolidator award. The research will investigate the extent to which the protection of the right to take part in culture of people with disabilities and the promotion of cultural diversity intersect and complement each other in the European Union (EU) legal order. It will disrupt the conventional approach adopted by EU law scholarship by using a combination of legal, empirical and arts-based research to pursue three complementary objectives, experiential, normative and theoretical respectively.

A number of staff members worked on multiple funded projects, notably Dr David Doyle (projects funded by the IRC, IHREC, and Dept. of Justice) and Dr Etáin Quigley (H2020; Enterprise Ireland).

In addition to a number of international funding bids, there was a substantial increase in the number of applications for research funding at a domestic level over the course of the year. For example, six staff members applied to the IRC New Foundations Scheme in 2018/19, two of whom received funding (Claire Hamilton and Aisling McMahon). Funding was also awarded for a number of projects by the Department of Justice (e.g. Clíodhna Murphy and David Doyle, *Understanding the Needs and Perspectives of Victims of Sex Trafficking in Ireland* and Claire Hamilton and Lynsey Black, *Public Confidence in the Irish Criminal Justice System*), and notably, for IRC Government of Ireland doctoral scholarships (Muiread Murphy and Niamh Wade were awarded four and three-year awards respectively). Growth of the PhD/post-doctoral cohort is a key strategic priority for the Department.

Staff members in the Department are very active in communicating and disseminating research. Staff members spoke at a large number of national and international conferences and seminars around the world (not captured in the RIS report, as Law Conferences generally do not produce written proceedings), while Michael Doherty, Amina Adanan, Ian Marder, Maria Murphy, Tobias Lock, and Edana Richardson were keynote speakers at leading international conferences in (respectively) Dublin, Bangkok, Poland, Tilburg, Salamanca, and Durham.

Furthermore, the Department hosted a number of high-profile events and conferences during the year, including 'The Legacy of the Permanent Court of International Justice' and '70 Years of

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the Geneva Conventions' (April 2019; convened by Noelle Higgins and Amina Adanan); the Jean Monnet Summer School "The EU and Human Rights in a Time of Crisis" as part of the JM project "EU External Relations in a Time of Crisis" – June 2019 (Delia Ferri was the lead organiser); and Claire Hamilton led the organisation of the Maynooth University Interdepartmental Crime and Security Research Group (four meetings) and the Criminal Law Forum (two meetings). With colleagues from Exeter University, Aisling McMahon established the UK-Ireland Patent Law Network, and the first Irish meeting of the group was held in Maynooth in June 2019. Ian Marder organised a one-day symposium on the development of restorative justice in the Irish criminal justice system.



Dr Aisling McMahon

The Department places a priority (as one of its underlying core values) on public engagement, and contribution to public policy reform (law reform, in particular). This year saw numerous contributions:

- > **Reports:** inter alia, for the European Commission (on social considerations in public procurement); the Organisation for Security and Co-operation in Europe (on the draft integration law of a European Country); the International Transport Worker's Federation (on EU Non-Financial Reporting Obligations and Modern Slavery) and Dublin City Council (on restorative practices). Under the supervision of Dr Clíodhna Murphy, a group of Maynooth University undergraduate and postgraduate law students produced a report on Safe Haven Ireland's sailing trips (SHI is a non-profit organisation that aims to empower young people and foster integration in Ireland).
- > **Law Reform:** for the Council of Europe (the adoption by the Council of a new Recommendation concerning restorative justice in criminal matters); for the European Parliament (on the legal obligations of states not to recognise and not to aid or assist violations of international law); for the Irish Parliament (oral evidence before the Oireachtas Joint Committee on Employment Affairs and Social Protection; submission made to the Oireachtas

Committee on Justice and Equality); for the Irish Prison Service (Strategic Plan, 2019-22 and Action Plan for the Joint Management of Offenders); for the Scottish Parliament (advisory roles with the Culture, Tourism, Europe and External Committee on UK Constitutional Law and the National Task Force for Human Rights Leadership) and numerous briefs filed in US State and Federal trial and appellate courts.

- > **Consultant/Advisor:** Staff members acted in an advisory capacity, inter alia, to the Glencree Peace and Reconciliation Centre; the Health Service Executive; the Immigrant Council of Ireland; the Irish Council for Civil Liberties; SIPTU, Mercy Law Resource Centre; the Institute of Guidance Counsellors; Irish Transport Workers' Federation; the United Nations Expert Mechanism on the Rights of Indigenous Peoples and the World Health Organisation.
- > **Media:** Staff members from the Department of Law appeared regularly in local (e.g. Claremorris Community Radio, Kildare FM) and national media outlets (e.g. Newstalk, RTÉ, Today FM) speaking on matters relating, inter alia, to US Constitutional Law, Labour Law and Industrial Relations, public procurement, Brexit and imprisonment. Moreover, staff contributed pieces to the Irish Times, Oxford Business Law Blog, RTÉ Brainstorm (multiple pieces), The Conversation UK, Euronews, Journal.ie, The Guardian, The Irish Examiner and The Sunday Business Post during 2018-19. One faculty member (Seth Tillman) had 17 media contacts in this 12-month period.

CONSULTANCY REPORTS

- > For the European Commission (on social considerations in public procurement).
- > For the Organisation for Security and Co-operation in Europe (on the draft integration law of a European Country).
- > For the International Transport Worker's Federation (on EU Non-Financial Reporting Obligations and Modern Slavery).
- > For Dublin City Council (on restorative practices).
- > For Immigrant Council of Ireland (fact sheets produced by UG students).
- > For Safe Haven Ireland (report produced by UG and PG students).

LAW REFORM

- > Michael Doherty appeared before the Oireachtas Joint Committee on Employment Affairs and Social Protection (February 2019), which is examining the issue of false self-employment in Ireland.
- > Tobias Lock advised the Scottish Parliament's Culture, Tourism, Europe and External Committee on UK Constitutional Law and National Task Force for Human Rights Leadership.

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- > Seth Tillman acted as a consultant on numerous Amicus filings in US State and Federal trial and appellate courts.
- > Ian Marder contributed to the Irish *Prison Service's Strategic Plan, 2019-22* and *Action Plan for the Joint Management of Offenders*.
- > John Reynolds appeared before the European Parliament (on the legal obligations of states not to recognise and not to aid or assist violations of international law).

ADVISORY ROLES/PARTNERSHIPS WITH CIVIC BODIES

- > Ollie Bartlett collaborated with the World Health Organisation to produce research on public health pricing.
- > David Doyle briefed the Irish Human Rights and Equality Commission on the theme of inclusive education in advance of the annual meeting of the European Network of National Human Rights Institutions.
- > Advisor on restorative justice policies to the Irish Probation Service and Restorative Justice Service (Ian Marder).
- > Clíodhna Murphy advised the Irish Transport Workers' Federation on various issues relating to migrant fishermen.
- > 'Academic friend' of the United Nations Expert Mechanism on the Rights of Indigenous Peoples (Noelle Higgins).

DEPARTMENT OF SOCIOLOGY

The Department of Sociology continued its vigorous research and publication activity across a number of strategic areas, linked to a number of conferences and ongoing public engagement.

CULTURE, IDENTITY AND GLOBALISATION

The department has a particular strength in the study of Culture, Identity and Globalisation.

Rebecca King-O'Riain's article in the *Journal of Intercultural Studies* completed an important trilogy of research articles on the emotional life of globalisation and how relationships of love are a driver of transnational linkages, research that has figured on RTÉ radio and blogs as well as in an IMMA exhibition.

Brian Conway's article in the *Journal for the Scientific Study of Religion* on Catholic commitment in 52 countries also extended a series of significant articles on the global organisation of culture, in this case religion. This was complemented by Peter Murray's two articles on religion in Irish social and political history. John O'Laoidh won an IRC postgraduate fellowship to research Buddhist religious organisation.

SOCIAL MOVEMENTS AND POLITICS

The Department of Sociology has a particular strength in Political Sociology and 2018/19 saw a rich vein of research in this area.



Why Social Movements Matter by Laurence Cox was published in 2018

Laurence Cox published two books in this area this year. His book *Why Social Movements Matter* added to the literature in the area with an innovative treatment of the consequences of movements for social and political life, while an edited volume presented *the Voice of 1968*, with testimonies from those involved in the political struggles in the Global North of that momentous year. Postdoctoral researcher Alberto Arribas (mentored by Laurence) published a number of articles on engagement between scholars and social movements. Colin Coulter extended his analysis of protest in popular culture, including the songs of protest of the Clash and an article in *Irish Political Studies* on media coverage of anti-war protests. Laurence and Colin, with colleagues, organised a major conference on "*The Re-Birth of Marxism: Haunting the Future*" that explored the contributions of Marxism to the analysis and transformation of contemporary societies.

Pauline Cullen investigated the factors shaping gender inequalities in political participation and representation, including a book chapter analysing Irish women's participation in urban governance and an article in *Politics and Gender* on EU parliamentarians. Pauline and Mary Murphy published a book length report for the Rosa Luxemburg Foundation that provided a comprehensive account of feminist responses and resistance to austerity policies in Ireland. A number of important events explored similar issues, including the visit of Minister of Children and Youth Affairs Katherine Zappone in December and a Symposium on International Women's Day, to mark 100 years since women's suffrage in the 1918 General Election.

Other department scholars examined the macro shifts in global politics including Barry Cannon's article in *New Political Science* challenging the usefulness of the idea of 'populism' in understanding contemporary politics. John O'Brennan was awarded

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a further Jean Monnet Professorship and continued his research on EU Enlargement and the Western Balkans, including an IIEA paper on the topic. Talks on populism in Europe by Fintan O'Toole, Professor Carlo Ruzza (Trento) and Professor Ayhan Kaya (Istanbul Bilgi University) supported departmental research in this area.

POLITICAL ECONOMY, ENVIRONMENT AND DEVELOPMENT



Professor Ray O'Neill, Professor Ronaldo Munck, Professor Honor Fagan and the Director General of Irish Aid, Ruairi de Burca at the launch of the Handbook on Development and Social Change

The department has a strong tradition in the sociological analysis of economic life and development. Professor Honor Fagan continued this tradition, co-editing the *Handbook on Development and Social Change*. Honor leads social science analysis in two major research projects aiming to transform access to safe drinking water through social design and localised adaptation, operation, and management of integrated solar technologies in four case study areas in South Africa, Malawi, Ethiopia and Uganda. She published an article on Water in community-managed water supply systems in rural Uganda.

Professor Mary Corcoran co-edited a special issue of *Nature and Culture* on "Civil Society and Urban Agriculture" which explored how civil society mediates access to land, food production and community development across Europe. Mary also received a 2018 Fulbright-EPA award where she investigated related issues around food and urban agriculture at the Ireland Great Hunger Institute at Quinnipiac University, in Connecticut.

Eoin Flaherty joined the department via Queen's and UCD in 2018 and published a series of articles on financialisation (the growing presence and power of finance in the economy) and inequality. This included an article comparing different national pathways to inequality of top incomes, published in the *Journal of Comparative Policy Analysis*.

We were also happy to welcome Professor Constantine Passaris, Dobbin Atlantic Scholar, to conduct his research on the Irish economy in summer 2019.

LABOUR MARKETS, WELFARE POLICIES AND INEQUALITY

This analysis of economic life and social inequalities is also pursued by departmental colleagues examining how labour markets, welfare policies, households and individuals interact to produce patterns of inequality.



Professor Jane Gray

Professor Jane Gray drew on a number of recent research projects to publish a series of articles on the lives of lone parents and marginalised communities. These included an article in the *Journal of Poverty and Social Justice*, exploring the (in)adequacy of in-work benefits in Irish lone parent labour market activation policy, and an article in *Contemporary Social Science* that explored how biographical interviews could be used to explore 'resilience' in the face of structures of marginalisation.

Seán Ó Riain explored similar issues in an article and book chapter on Ireland's 'low learning trap' in the low wage labour market. Three PhD students from his New Deals in the New Economy project completed their theses on work and well-being in Denmark and Ireland, on financialisation in the same two countries, and on the consequences of labour market moves in Germany and the UK. Josh Moody was awarded an IRC postgraduate fellowship to research careers and identity in Irish software and creative industries, supervised by Seán and Aphra Kerr.

Mary Murphy also investigated public policy impacts in labour market and housing policies. This included research that explored the effects of policy changes on the partners of welfare claimants (in the *Irish Journal of Sociology*) and of labour market interventions (in *Trials*, with postdoctoral researcher Nuala Whelan). This research was also presented by Mary at an Oireachtas committee. An article in *Administration* explored the impact of the marketization of social housing on homeless families, while postdoctoral researcher Valesa Lima reviewed the Irish experience of social housing in an article in *Housing*.

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A series of four “Thinking Out Loud” seminars was organised by the Department’s Political Economy, Work and Social Inequality (PEWSI) cluster tackling topics such as the organisation of work, employee engagement, housing inequalities, and risk and resilience in the labour market.

ENGAGEMENT AND ENGAGED RESEARCH

1. Delma Byrne

- Member, HEAR (Higher Education Access Route) Review Working Group, led by Irish Universities Association.
- Research Advisory Committee Member, Irish Human Rights and Equality Commission (IHREC).
- Consultancy for the Arts Council on their ten-year strategy. Political, Economic, Social, Technological, Legal, Environmental (PESTLE) meeting.

2. Delma Byrne and Seán Ó Riain

- Report on “Literacy Matters in Social and Community Life” for the National Adult Literacy Agency (NALA).

3. Delma Byrne and Caitríona Fitzgerald

- Report on “Evaluation of Doodle Families” for the Childhood Development Initiative (CDI), Dublin.

4. Brian Conway

- Correspondent for Ireland in Eurel, a Strasbourg-based network of scholars of religion and law representing 30+ countries in Europe.

5. Mary Corcoran

- A variety of dialogues between art and the social scientists; including with artist Amanda Jane Graham in Leitrim, with visual artist Mary Burke in Laois and a seminar on the arts and community engagement as part of the Townscape Exhibition at MU Library.

6. Laurence Cox

- Research Consultant for the Field Centre (research centre for the Ruskin Mill special needs education trust, Stroud, UK). Includes research strategy, advice and coordination; editing and writing for the Field Centre Research and Practice Journal; mentoring staff in research etc.
- Ongoing collaborative work with a range of social movement activists, including through blog and magazine articles, co-authoring, editing the Interface journal, talks, and more.

7. Pauline Cullen

- Worked with the Domestic Workers Action Group (Migrants Rights Centre Ireland) to support the My Fair Home campaign

that mobilises for better working conditions for home care workers. Delivered collaborative workshop on care as a political strategy.

- Worked with the National Women’s Council of Ireland (NWCI) on a strategy for Feminist Leadership. Provided inputs into the ongoing organizational change process at NWCI on how to model organizational change through feminist leadership principles and mechanisms.
- Collaborated with the National Traveller Women’s Forum and Akidwa (Migrant Women’s Network) on funding proposal to support the political candidacy and participation of ethnic and racial minority women in local politics.
- National Women’s Council of Ireland Pre-Budget Submission 2020 Department of Social Protection and Employment. Dublin: Report. Provided data input and framework for NWCI pre-budget submission.
- Produced report on the case for using gender quotas to increase women’s representation on the boards of companies i.e. Increasing Gender Balance on Boards: The case for Legislative Gender Quotas in Ireland.

8. Pauline Cullen and Claire McGing

- Produced a report for the NWCI (including the first survey conducted of sitting local councillors) and interviews with unsuccessful female councillors and female ethnic minority candidates on women’s political candidacy and representation in local government; i.e. Women Beyond the Dail: More Women in Local Government. National Women’s Council of Ireland, Dublin.

9. Honor Fagan

- Two H2020 projects involve engagement with civil society and state actors around water provision internationally. The work package in Waterspoutt aims to transform access to solar disinfection of poor water in Ethiopia, Malawi, Uganda and South Africa and the work package in PANI-Water aims to accelerate the social sustainability impact of drinking water disinfection units and demo/pilot plants set up to recycle wastewater for agricultural use in India.

10. Eoin Flaherty

- Ongoing collaboration with Nevin Economic Research Institute. Including External Reviewer, Quarterly Economic Observer and Research Papers (2016-present); Paper Presentation; NERI Belfast Seminar Series; ongoing research using multiple waves of Understanding Society/BHPS data with specific focus on Northern Ireland.

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11. Jane Gray

- Was invited to submit a short article on 'Changing Irish Families' for the Barnardo's publication ChildLinks in 2018. The article emphasized the value of opening a more dynamic window on continuities and changes in Irish family life, focusing on the generational standpoint of childhood.
- Was invited to contribute a blog post for the UK National Centre for Research Methods Big Qual Hub that was published in 2019. The blog post focused on reconciling different temporalities when bringing together a data set comprising retrospective life story narratives with a set of qualitative longitudinal interviews from a prospective panel study.

12. Aphra Kerr

- The Refiguring Innovation in Games (SSHRC funded) project involved creative game making workshops for adults, with a project focus on gender inclusion. Collaborations with partners Coding Grace (community and volunteer run foundation), Portershed (innovation centre) and Galway Technology Centre.
- Worked on gamedevelopers.ie Community and volunteer run information and community resource sharing research, jobs and news. Industry funded but also working with community groups including Imirt (the game makers association) and Coding Grace.
- Public and Citizen Engagement in collaboration with the ADAPT SFI centre for Digital Content Technologies. Moderated a citizen Think-In on 'Artificial Intelligence, Privacy and Civil Liberties' Science Week.
- Academic member of the Media Literacy network. Affiliated to the Broadcasting Authority of Ireland. Be Smart media literacy campaign run across traditional and media channels. Also part of the working research group building a research database for the network website.

13. Rebecca Chiyoko King-O'Riain

- Worked with Association of Mixed Race Irish, who most recently led a campaign to raise awareness about the historical treatment of mixed race people in Irish state care. They have used Rebecca's research as a part of their platform to lobby for recognition and reparation to victims.
- Worked with UCD colleagues on "Experience Japan" to promote and hold events linked to making Japan and Japanese culture more visible in Ireland.
- Worked with the Korean Embassy to raise the visibility of Korea and Korean culture in Ireland, including this year's winner of the world K-pop Festival (who was from Ireland).

14. Mary Murphy

- Forsa Trade Union, "More Power To You". A research project to guide the trade union policy regarding local government reform and local government related policy in refuse collection public housing, environmental and water. Feeding into the Public Service International 'Future is Public' global campaign.
- Focus Ireland. Ongoing member of Focus Ireland Research Advisory Group (2007-). Local NGO partner in ReInVest H2020 funded project (2015-2019) which involved close collaboration with peer researchers who are tenants of Focus Ireland.
- Community Work Ireland. Developed a research agenda from a May 2019 symposium on commissioning and procurement's impact on civil society organisations. Networking and collaboration led to subsequently successful application for New Foundations IRC grand 2019/2020.

15. Mary Murphy and Pauline Cullen

- Produced a country case study report on women's position in Ireland since austerity and women's organization's responses to the economic crisis for the Brussels based think tank ROSA-LUXEMBURG-STIFTUNG, i.e. Irish Feminist Approaches against Austerity Regimes.
- Conducted a gender budget assessment for the NWCI on the 2018 Budget i.e. National Women's Council of Ireland Gender Budget assessment Exercise for Budget 2018.

16. Seán Ó Riain

- Worked with Master Trust on issues of healthcare organisation and policy, including providing reports on local demand for hospital services and comparative analysis of healthcare systems.
- Ongoing work with TASC (Think tank for Action on Social Change). Included TASC and Carnegie UK Trust Fulfilling Work in Ireland roundtable; Chair and Moderator, Seminar on Tax-Based Industrial Policy.

17. Paul Ryan

- Research Project with HIV Ireland on 'Exploring the impact of the sex purchase ban on the health and well-being of sex workers in Ireland' (with Dr Kathryn McGarry, MU).
- Board Member, Sex Workers Alliance Ireland.

18. Eamonn Slater

- Advised Mayo North East Leader group on providing academic programmes and local classes -mostly on ecology and (with Clodagh O'Malley-Gannon) provided an overall framework for a more ecological friendly framework for the area.

Multiple departmental staff are involved in regular and diverse media appearances, including at least ten of the staff in 2019.

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MAYNOOTH UNIVERSITY LIBRARY

The Library continued to have a strong publications record with eight articles/chapter published during the year. Much of this is evidence-based articles/book chapters, which position library practice in the context of the literature on specific topics, such as the Library UX (User Experience) research project with the Anthropology department and a diversity awareness programme which was offered to all staff.

All five members of the Library Senior Management Team (SMT) are actively involved in practice-based research and publishing. One member of the team is undertaking a PhD which involves the scholarly interrogation of a significant library collection.

There were a number of collaborations with academic colleagues on books and book chapters on a variety of topics including Library Special Collections. A chapter in *Book collecting in Ireland and Britain, 1650-1850* published by Four Courts Press, covered an ecclesiastical collection held by the Library, while the second edition of the book *Silence Would be Treason: Last Writings of Ken Saro-Wiwa* published by Daraja Press draws on one of our major archives. The letters of Maynooth Priest and renowned Irish author and scholar Peadar O'Laoigre were covered in an article in the Irish language in *Irisleabhar Mhá Nuad*. Collaboration was also evident in journal publication with a member of staff working with academic colleagues on a systematic review article.

Library staff also contributed to the professional body literature, publishing in *An Leabharlann: The Irish Library and the Archives and Records Association Ireland Newsletter*.

Staff also presented at national and international conferences and represented the Library on national and international committees and editorial boards. In 2018 the Library created Maynooth Academic Publishing (MAP) to advance open scholarship and engagement with research, through enabling open publishing. This involves advice, funding and technical support. Initiatives include the hosting of the *Open Journal of Astrophysics* an international, peer-reviewed journal. February 2020 saw the launch of the *Journal of Military History and Defence Studies* during Love Data Week. This biannual peer reviewed journal, is published in collaboration with the History department. The library is also supporting the continued publication of the open access peer-reviewed journal *Dancecult* (Journal of Electronic Dance music Culture) with the Geography department. MAP has the potential to become a world-class publishing platform with in-built peer review and could be a key support for Maynooth University research.



RESEARCH INSTITUTES AND CENTRES



ARTS AND HUMANITIES INSTITUTE

The Arts and Humanities Institute (AHI) was instituted in January 2018, with Professor Tom O'Connor as inaugural director. AHI subsumed and replaced An Foras Feasa (AFF) as the research institute for the Arts and Humanities. In line with the University's Strategic Plan 2018-22, AHI has a threefold objective: to support the enhancement of research culture in the Faculty of Arts and the University generally; to increase volume and quality of Faculty research outputs; to grow external research grant income.

As the new structures nested down, the director consulted Faculty colleagues, in faculty, through departmental meetings, at faculty research meetings and individually, on the issues of research culture, research activity/output and funding, both internal and external. From this consultation, and subsequent conversations with the Dean and RDO colleagues, it emerged that research active Faculty colleagues faced three principal challenges: scholarly isolation; thematic fragmentation; uncoordinated research support.

Scholarly isolation was exacerbated by low institutional visibility, inconsistent and/or poor resourcing, and limited external networking. Thematic fragmentation meant that much excellent individual research failed to develop into larger-scale and more ambitious, team based research projects that were interdisciplinary in character, theme and objective.

Uncoordinated support meant that much good effort was wasted due to duplication, inadequate follow through and lack of strategic direction. In response to these conversations, the Institute, during 2018-19, applied discretionary funding to the following initiatives:

- > Establishment of Early Career Support Scheme, designed to facilitate seminar and workshop activity leading to cooperative, interdisciplinary and international research cooperation with five successful applications: Bernard Bauer (Chron Hib); John Paul Newman (History); Mirna Vohnsen (Spanish) James Fraser (English); Suzanne Gottlober (Philosophy).
- > Visiting fellowship Scheme designed to encourage scholarly networking (6 successful applications).
- > Research Project Incubation Scheme to provide seed funding for new research projects: Clericus project, PI Thomas O'Connor AHI, Professor Salvador Ryan SPC; Tenerife project (PI Thomas O'Connor AHI, Dr John Bergin UCD).
- > Hosting and supporting funded research projects (as per accounts).
- > Reorganization of the Institute's PhD laboratory/social facility; inauguration of a post-graduate research enhancement programme, all designed to take PhD candidates through their programme and on to post-doctoral research activity, as post doctoral fellows, research assistants etc.

In 2018-19, AHI welcomed three new externally funded research projects:

- > IRC Junior Laureate award, was made to Dr Deborah Hayden in Early Irish in March 2018. Her Medieval Irish Medicine in its North-western European Context project won €190,640 [September 2018-September 2020].
- > The Letters of Frank Duff Project, funded by a grant from the Irish Legion of Mary PI Dr Jacinta Prunty [July 2019-April 2020 €70,000].

In 2018-19, AHI hosted the following ongoing externally funded projects:

- > ERC Horizon 2020 PI Professor David Stifter, Probabilistic Chronological Dating of Early Irish texts €1.8m [2015-2020].
- > AHI hosted four IRC post-doctoral fellowships, held by Drs Mary Boyle (German), Sarah Culhane (Media Studies), Niamh Campbell (English) and Egle Kackute (Modern Languages).

AHI provided seed funding and/or advice to the following research initiatives:

- > Establishment of the International Network for Music Theory, Technique and Technologies and the elaboration of its constitution (Dr Antonio Cascelli, Music).
- > Office accommodation for the Motherhood Project, for the preparation of an ERC networking grant in March 2020 (Dr Valerie Heffernan, German) EI grant-writing support [August 2019] for ERC Consolidator application 2020.
- > Budget allocation and office accommodation for the Atlas na Gaeilge Project, to run from September 2019 (an tOllamh Fiontan de Brun, Nua Ghaeilge).
- > Discussions for the establishment of Defence Studies Incubation Group (Dr David Murphy, History).
- > Discussion for the formation of a research group for the study of the Irish Medieval Town (Dr Michael Potterton, History).
- > Setting up of the Crisis [critical research in states, ecologies and societies] Network (Dr Catherine Gander, English).
- > Exploration of a cooperation with Engineering on Historical Sites Navigation (Dr John Dooley, Engineering).
- > Participation in ACLS digital extension grant application (Dr John Keating CS, Dr Aphra Kerr Sociology, Dr Adrienne Shaw, Temple University).
- > NPPSH [New Perspectives Postgraduate Symposium on the Humanities] conference programme and publication [October 2018].
- > AHI becomes member of the Consortium of Humanities Centres and Institutes and hosts four delegates at the CHCI annual conference 19-22 June.

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- > AHI becomes member of European Consortium for Humanities Institutes and Centres June 2019.
- > AHI Director acts as member of the board of the Irish Humanities Alliance.
- > AHI Director appointed to board of Beyond 2022.
- > AHI invited delegates participate in Digital Humanities Strategy: Breaking Silos.
- > Workshop TCD 30 Nov 2018; AHI hosts follow up workshop 6 March 2019.

AHI Hosted Projects Research Outputs/Activities:

1. CHRONHIB

The ERC funded Chronologicon Hibernicum project (ChronHib) PI Professor David Stifter, entered its fourth year in 2018-19. The activities focus was the delivery of the CorPH -Corpus PalaeoHibernicum, an annotated linguistic database plus corpus of most of the contemporary Old Irish language sources. A web programmer, a Bayesian statistician and a senior researcher with a background in medieval Irish digital humanities, joined the team in 2018-19, to develop the VRE front end and the statistical models of language variation and change.

AWARDS AND GRANTS

Professor David Stifter received a H2020-Proposal Preparation Support grant by Enterprise Ireland, to hire a research assistant for four months in spring 2019. Health issues precluded the submission of a H2020 application for 2019.

Dr Fangzhe Qiu recipient of Charlemont Grant 2019 (Royal Irish Academy) for research in Uppsala (June 2019), and of a NUI Pilot Early Career Academics Scheme grant to organise workshop on statistics in corpus linguistics research (Sept. 2019).

Dr Bernhard Bauer recipient of MUAHI Early Career Research Grant; winner of the Ignite award (MU Research Week 2018).

PRESENTATIONS AND PUBLICATIONS

During the academic year 2018-19, members of the ChronHib project delivered 15 presentations at international venues and 6 in Ireland, of which 8/3 were invited. Highlights were a full ChronHib-organised session at the International Celtic Conference in Bangor (July 2019), and a series of guest lectures in Beijing (China), and in the Chinese Embassy in Dublin delivered by Fangzhe Qiu. David Stifter delivered the O'Donnell Lecture at Oxford (May 2019).

The team published 6 scientific articles in journals and 5 chapters in proceedings or collective volumes with an official publication date of 2018 including:

Fangzhe Qiu, David Stifter, Bernhard Bauer, Elliott Lash, Tianbo Ji 'Chronologicon Hibernicum: A Probabilistic Chronological Framework for Dating Early Irish Language Developments and Literature' in: Marinos Ioannides et al. (Eds.) [= Lecture Notes in Computer Science 11196], Cham: Springer Nature Switzerland 2018, 731-740. doi 10.1007/978-3-030-01762-0 65.

OTHER ACTIVITIES AND PUBLIC HUMANITIES



EU Research, Spring 2019, 64-65

'In search of Old Irish' in the popular science magazine EU Research, Spring 2019, 64-65. In December 2018, a 'long-distance party' was hosted via Skype to launch a Festschrift for Professor Neil McLeod (Perth, Australia), to which three colleagues from Early Irish (two from ChronHib) had contributed. In January 2019, project PI participated in the recording of a set of 14 half-hour video lectures on Old Irish as part of the project 'Indo-European Languages for the 21st Century' at the University of Göttingen (Germany). The videos, which are currently being edited, will go online early 2020. PI appeared in episode 2 'Irish Placenames on Ptolemy's Map' of John Creedon's Atlas of Ireland (RTÉ, 18 August 2019).

2. MEDIEVAL IRISH MEDICAL MANUSCRIPTS PROJECT

AWARDS AND GRANTS

Project PI recipient of an Enterprise Ireland ERC proposal support grant (€12,727).

PUBLICATIONS AND PRESENTATIONS

Project PI published: 'Three Versified Medical Recipes Invoking Dian Ceht', in Fir Fesso: A Festschrift for Neil McLeod, ed. by Anders Ahlqvist and Pamela O'Neill, Sydney Series in Celtic Studies 17 (Sydney: Celtic Studies Foundation, 2018), pp. 107-23; 'A Versified Cure for Headache and Some Lexicographical Notes', Keltische Forschungen 8 (2019), 7-22. The Project delivered 10 academic papers in total, including 6 invited lectures at the Dublin Institute for Advanced Studies, two in Maynooth University (including

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keynote lecture at the Arts & Humanities Institute for MU Research Week in October, on each at the Royal Irish Academy and Queen's University Belfast. Conference papers delivered at Harvard University, Bangor University, University of Nottingham and the Dublin Institute for Advanced Studies).

OTHER ACTIVITIES AND PUBLIC HUMANITIES

- > Chair of the Organising Committee for the Annual Colloquium of the Henry Sweet Society for the History of Linguistic Ideas, Maynooth University, 5-8 September 2018 (55 participants).
- > 'Medieval Manuscripts Meet Modern Science: A Workshop on Theory and Practice', organised with Professor Christina Lee (University of Nottingham), held at the University of Nottingham (7 June 2019).
- > Organised 2 panels (6 speakers) on 'New Work on Medicine and Medical Texts in the Celtic Languages', 16th International Congress of Celtic Studies, Bangor University (July 2019).
- > Maynooth coordinator for the annual MU/TCD/UCD Postgraduate Medievalists Day, held at UCD in May 2019.
- > Member of the ad hoc international committee of the 16th International Congress of Celtic Studies, Bangor University, Wales.
- > Member of the editorial board for the Journal of Celtic Linguistics.
- > Member of research committees for MU Academic Council and Faculty of Arts, Celtic Studies & Philosophy.
- > March 2019: Live Radio Interview: Discussion of medieval Irish studies and the modern Irish language on The Pat Kenny Show, Newstalk (with David Stifter & Fangzhe Qiu).
- > January 2019: Live Interview: Discussion of medieval Irish medical manuscripts with RTÉ's Jim Carroll at the BT Young Scientist and Technology Exhibition, Dublin RDS.
- > November 2018: Online Publication: **'What was it like to go to the doctor in medieval Ireland?'** RTÉ Brainstorm.
- > October 2018: Live Radio Interview: Discussion of medieval Irish medical manuscripts on The Chatroom with Angela Faull, CRCfm 102.9 Castlebar.

DIRECTOR'S ACTIVITIES

PUBLICATIONS AND PRESENTATIONS:

- > ed. *Archivium Hibernicum LXXI* (2018).
- > ed. *Archivium Hibernicum LXXII* (2019).
- > ed. *Forming Catholic Communities: Irish, Scots and English college networks in Europe 1568-1918* (Leiden: Brill, 2019).
- > ed. *Catholic communities abroad: education, migration and Catholicism in early modern Europe* (Manchester: Manchester University Press, 2018).
- > Sole author 'The Catholic Church and Catholic in an era of Sanctions' *The Cambridge History of Ireland Vol III 17 30-1880* (Cambridge: Cambridge University Press, 2018) ed. James Kelly. Pp 257-279.
- > Sole author, 'Prequels: the Irish European Diaspora. Ireland in the European Eye (Dublin: Royal Irish Academy, 2019), eds. Gisela Holftler, Bettina Migge, pp 3-19.

OTHER ACTIVITIES/PUBLIC HUMANITIES:

- > Academic reviewer for British Catholic History (Cambridge), Cuadernos de Historia (Complutensian University, Madrid), Irish Historical Studies (Belfast, Dublin), Etudes irlandaises (Brest), The Historical Journal (Cambridge), Journal of Religious History (Sydney).
- > The English Historical Review (Oxford) Bulletin for Spanish and Portuguese Historical Studies (Omaha).
- > Member of Irish Manuscripts Commission.
- > Member of Fondation Irlandaise, Paris.
- > Member of the Irish Humanities Alliance Board, member of the IHA working group on membership and strategy.
- > Invited Speaker, "'L' Histoire des papes" de Ludwig von Pastor et la reception de l' CEuvre dans le monde anglo-saxon' Ecole française de Rome and Romisches Institut der Gorres-Gesellschaft, Rome, 2018.
- > Invited Speaker, English and Irish activities in the Iberian Inquisitions, Hertford College, Oxford, Early modern History Seminar, Oxford University, 2018.
- > Invited Speaker, The Irish College, Douai 1594-1638, Durham University, 2018.
- > Invited Speaker, 'Strangers to Citizens: 1550-1820', Toronto University, 2018.
- > Keynote Speaker 'The Irish European Diaspora', West Cork History Festival, 2019.

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HAMILTON INSTITUTE

The Hamilton institute acts as a multi-departmental focal point for 37 affiliated university faculty with research expertise and interests in the numerate disciplines. In addition to its director, it hosts five seconded members of MU faculty and their research teams drawn from the Departments of Computer Science, Electronic Engineering, and Mathematics and Statistics. Members of the institute participate as funded and principle investigators in several of the SFI Research Centres including CONNECT, CONFIRM, INSIGHT, I-FORM and LERO. The institute welcomed five new externally funded graduate students and two postdocs during the academic year.

GRANT SUCCESS

In the academic year 2018 to 2019, seconded faculty successfully participated in research funding bids worth more than €35 million, with over €11 million due to come to Maynooth University.

Grant highlights of this academic year included a prestigious ERC Consolidator Award, "Active-DNA", to Professor Damien Woods who is seconded from the Department of Computer Science. Taking inspiration from the pioneering work of the late Alan Turing, Professor Woods' team designs reprogrammable computations but uses DNA molecules as their building blocks. The ability to run any type of software program without having to change the hardware is what caused computers to become so prevalent. In their high-risk, high-gain research, Professor Wood's team are implementing that principle in molecules, essentially embedding algorithms within chemical processes. This work sees the team prove fundamental mathematical theorems, and realise their predictions in wet-lab experiments performed in Maynooth University's Biosciences building.

A second grant highlight was that Professor Andrew Parnell, seconded from the Department of Mathematics and Statistics, is a co-investigator in the €8 million European Union Horizon 2020 project InnoVar, which is directed towards improving EU crop sustainability. Its goal is to apply modern, cutting-edge data analytic methodologies, such as genomics, phenomics and machine learning, to revolutionise crop variety-testing. This research will generate new breeding protocols for wheat that achieve improved efficiency as tested in a series of EU-wide trials across a wide range of agro-climatic regions. Results from the research will be presented in the form of the InnoVar App, which will empower EU growers to select tailored varieties with greater resilient to climate change, moving towards the sustainability of wheat for the whole of the European Union. The original approach the project will take is expected to provide templates for other crops, providing road maps for evaluation, update and synergies.

A significant grant highlight was the awarding of the €21 million Science Foundation Ireland Centre for Research Training (CRT) in Foundations of Data Science (www.data-science.ie), representing

the largest ever investment in mathematical sciences research in Ireland. The CRT is an innovative doctoral training partnership between Maynooth University, the University of Limerick and University College Dublin, and enterprise and industry in Ireland, led by Hamilton Institute director Professor Ken Duffy, Professor James Gleeson (UL) and Professor Claire Gormley (UCD). Partnering with Skillnet Ireland, the CRT was awarded €13.6 million by Science Foundation Ireland, with the HEIs contributing €4 million, and the remainder coming from industry and enterprise.

The CRT will train over 130 PhD students in a world-class foundational understanding of Applied Mathematics, Statistics, and Machine Learning. It will address existing skills gaps in data analytics, and generate a cohort of skilled workers with the ability to create bespoke algorithmic methods that turn data into knowledge. The CRT will impact real-world challenges in the areas of Data Analytics, Privacy and Security, Smart Manufacturing, Health and Well-being. Coordinated by Skillnet Ireland, CRT students will engage with industry and enterprise, and will develop an understanding of the real-world applications of data science, gaining transversal skills and an appreciation for true impact in the process. Students will also undertake academic placements at internationally renowned collaborating institutions, benefiting from exposure to the research activities in world-class universities.

At Maynooth University, the CRT will bring over 40 funded PhD studentships to be trained by over 25 expert supervisors drawn from the Department of Chemistry, the Department of Computer Science, the Department of Electronic Engineering, the Department of Mathematics and Statistics, the National Centre for Geocomputation, and the Hamilton Institute. This represents a significant contribution towards the university's strategic goal of extending and enhancing its postgraduate programmes.

RESEARCH IMPACT

In the calendar year 2018, several Hamilton Institute seconded faculty published a diversity of papers that have already obtained more than 50 citations (source: google scholar), including: Professor Vicenc Torra's work on Hesitant Fuzzy Sets, published in Information Fusion; Professor Andrew Parnell's work introducing Bayesian methods for estimating animal diets and sediment un-mixing in rivers, published in PeerJ; and Professor Ken Duffy's multidisciplinary work understanding the failure of blood cell production during acute myeloid leukemia, published in Cell Stem Cell.

At the start of 2019, a paper published in 2017 by Professor Ken Duffy with collaborators Soheil Feizi, Ali Makhdoumi, Professor Manolis Kellis, and Professor Muriel Médard, all from MIT, won a prestigious prize: the IEEE Transactions on Network Science and Engineering Best Paper Award, of all those published between 2016 and 2018. The article, Network Maximal Correlation, introduces a new statistic for measuring dependency in multivariate random

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variables, as well as introducing a computational framework to evaluate it given multivariate data sets. The goal of the new measure is to automatically identify complex, non-linear dependencies that would not be observed with traditional measures of correlation, and has since been used to identify previously unrecognised genetic modules in cancer.

In 2019, a paper published in 2016 by Professor Subhrakanti Dey with collaborators Professor Ling Shi and Dr Yuzhe Li (Hong Kong University of Science and Technology), and Professor Daniel Quevedo (University of Paderborn, Germany) was nominated for the Best Paper Award for the IEEE Transactions on Control of Network Systems. This award was open to all papers published in this journal during 2016-2018. The paper, titled "SINR-based DoS attack on remote state estimation: A game-theoretic approach", investigated a stochastic game theoretic framework and its application to enhancement of cyber-physical security against malicious denial of service attacks, and has received 94 citations to date.

Seconded faculty gave invited talks all over the world about their research at MU, including in France, Ireland, Japan, Portugal, Turkey, the UK and the USA. They also co-organised conferences in Austria, Ireland, Japan, Italy, Spain, the UK and the USA.

INNOVATION, INDUSTRY AND ENTERPRISE

In 2018, the institute continued its collaboration with IBM's Innovation Team. Supervised by Dr David Malone, Rana Maher graduated with a M.Sc. on analysis of Online Business Networks, Peter Keane began a M.Sc. on Collaboration Networks, and Jonathan Dunne, one of IBM's technical staff, completed his Ph.D. in the Hamilton Institute working on statistical modelling of cloud systems. The collaborative work between Dr Malone and IBM led to three US Patent Applications being granted in 2018. Such was the value of the training Dr Dunne received from Dr Malone that on his return to IBM he was asked to assemble a team of like-minded researchers, at least one of whom seems likely to join the institute's doctoral programme, funded directly by IBM.

The Hamilton Institute currently has a range of awarded and licensed patents. Several other Invention Disclosures and Provisional Patent Applications, filed with international and national collaborators, by seconded faculty are presently being processed by the US and EU patent offices.

OUTREACH AND OTHER ACTIVITIES

In 2018, there was also considerable attention paid to Dr David Malone's work on Bitcoin's Energy Consumption, performed with his Hamilton Institute graduate Karl O'Dwyer. While their research was published in 2014, growing concern about the impact of ICT on the environment drove interest both in academia, where the work received 118 citations in 2018 alone, and in the popular media. Dr

Malone provided interviews and obtained coverage in news outlets including Deutsche Welle, the Washington Post, Bloomberg News, MIT Technology Review, and the Irish Times.

In 2019, Professor Andrew Parnell, who is an expert reviewer on the Intergovernmental Panel on Climate Change, gave a lengthy interview to the Irish Times on analysis of sea level changes, leading off with 'It's actually quite scary', which his detailed scientific insight made clear.

Professor Subhrakanti Dey was awarded a Visiting Scientist fellowship to University of Padovato to enable collaboration with researchers in the Department of Information Engineering, working on networked control systems with applications to smart manufacturing systems and Industry 4.0. During 2018-2019, Professor Dey continued to serve as an Associate Editor/Editor on the IEEE Transactions on Control of Network Systems, and IEEE Transactions on Wireless Communications, respectively. From Jan 2019, he joined the editorial board of the IEEE Control Systems Letters. During this period, he also served as the Chair of the Stochastic Systems Technical Committee of the International Federation of Automatic Control (IFAC).

With his focus on the development of Artificial Intelligence, Professor Vicenc Torra was elected a member of the Ethics Advisory Board of the Human Brain Project from 2020 for three years.

GOVERNANCE

As part of the institute's governance structure, in 2019 it added members to its external advisory board. This board is constituted of senior independent voices that provide informed advice on international developments, both academic and commercial, in numerate disciplines that help guide the institute's plans.

The director of the Hamilton Institute is grateful to the current board (2019-present), consisting of the following esteemed colleagues: Professor Anne Condon, University of British Columbia, a Computer Science expert who is a Fellow of the Association for Computing Machinery and the Royal Society of Canada; Professor Josep Domingo-Ferrer, Universitat Rovira i Virgili, an expert on Data Privacy and Machine Learning who is a Fellow of the Institute of Electrical and Electronics Engineers; and Professor Andrea Goldsmith, Stanford University, who is a renowned Communications Engineer that is a member of the National Academy of Engineering and the American Academy of Arts and Sciences, as well as being a Fellow of the Institute of Electrical and Electronics Engineers.

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MU SOCIAL SCIENCE INSTITUTE

Maynooth University is recognized as a leading national and international centre for interdisciplinary social science research. Several social science projects at Maynooth University (MU) across a range of disciplines are coordinated and conducted in MUSSI. The Institute incorporates and builds on the longstanding success of several existing research institutes, centres and research active Departments at MU.

MUSSI's current component research groups and centres include the National Institute for Regional and Spatial Analysis (NIRSA) and the National Centre for Geocomputation (NCG). The institute also consolidates, develops and supports a number of associated critical national data infrastructures including the All-Island Research Observatory (AIRO), the Irish Qualitative Data Archive (IQDA), ICLRD (Irish Centre for Local and Regional Development) and Digital Repository Ireland (DRI). Departments involved in current funded projects in the institute include Psychology, Geography, Anthropology, Computer Science, Sociology, The Innovation Value Institute (IVI) and the Hamilton Institute.

The Institute has been growing significantly in recent years and now comprises 61 personnel including: Director MUSSI (1); Director NCG (1); Academic Staff (9); Researchers (34); Administrative (5); Doctoral Students (6); Student Interns (3). It also supports 161 affiliate members across the university.

MUSSI is very well known across the HEI sector and by social and economic stakeholders, both North and South. This is reflected in the large amount of contract research that it is asked to undertake for public and third sector agencies and it is regularly asked to partner international organisations and other HEIs as part of transnational research bids. These awards have generated cutting edge research for policy and society in a wide range of areas.

This report provides just a snapshot/sub sample of our activities and PI's and researchers achievements.

RESEARCH FUNDING

Sixty funded research projects with a combined value of €4,667,518 were awarded to staff and institute members during the academic year 18/19. Awards were made from a variety of stakeholders/funding agencies including H2020, IRC, SFI, and industry partners. Examples include:

- > Dr Sinead O'Gorman, Scholars at Risk Europe Director, is leading the InSPIREurope project. This is a new EU-funded initiative to support researchers at risk. Funded under the European Commission's Marie Skłodowska-Curie Actions, the launch of InSPIREurope, is recognition of a shared commitment to excellence in research and to the principles of freedom of inquiry and academic freedom that are essential for world-class research.

- > Professor Honor Fagan and Dr Chandana Mathur are leading WP4 of "PANIWATER". The Photo-irradiation and Adsorption based Novel Innovations for Water-treatment Project is a Water for our Environment Economy and Society Horizon 2020 funded programme. It will support wastewater treatment for the safe reuse of water in agriculture, in related industries and public water structures.
- > The Institute was highly successful in securing Irish Research Council (IRC) funding with twenty awards valued at €1,297,718 won across the various calls. Dr Mary Murphy secured a number of awards including; COALESCE, New Foundations and a GOI Postdoc Fellowship. Other successful recipients included Dr Aileen O'Carroll (COALESCE) and Professor Karen Till (New Foundations). A number of other Postdoctoral and Postgraduate awards were awarded across the institute.
- > Other successful funding included an MU project led by Dr Tim McCarthy to support autonomous vehicle technologies. The funding was one of six research projects awarded through the SFI Research Infrastructure Programme, a total of €25m was dispersed among the recipients.
- > The All Island Research Observatory (AIRO) secured funding in the region of €390k from tenders, and other government agencies.
- > Professor Rob Kitchin, Professor Chris Brundston, Martin Charlton and Dr Jeneen Naji continued to oversee the SFI funded Dublin City Dashboards project, a high impact public project.

KNOWLEDGE TRANSFER AND ENGAGED RESEARCH

In addition to conducting research for and with various organisations, the Institute has engaged in many other knowledge transfer activities. AIRO and IQDA for example have developed and delivered short courses for practitioners and senior management in the public, community and private sectors. The Institute has also organised a number of workshops and conferences targeted at a practitioner audience, especially in the areas of spatial planning, drones, data archiving, gender equality and mental health. The PRIMERA research team in the Centre for Mental Health and Community Research organised and hosted a masterclass in 'Family-Focused Practice' during 2018, this event was attended by approx. 80 clinicians from services across the country.

MUSSI has been highly proactive in developing an applied research agenda that provides expert knowledge and skills to the public, private and third section both North and South. It has made significant contributions to national and local government policy and cross-border cooperation across a broad range of areas.

In January 2019 AIRO and Ordnance Survey Ireland (OSI) signed a Memorandum of Understanding. This MoU provides AIRO with access to a technical geospatial working environment (GeoHive) whereby AIRO can host and deploy a series of national mapping

viewers in conjunction with the OSI. Such viewers will provide Government Departments, Regional and Local Authorities, planners, policy makers, researchers and members of the public with access to a wide variety of spatial datasets to aid decision making and evidence informed planning.

In September 2019 the project team at AIRO, in conjunction with colleagues at UCD, completed the development of a new Environmental Sensitivity Mapping (ESM) toolkit on behalf of the Environmental Protection Agency (EPA). ESM is a novel GIS decision support tool for Strategic Environmental Assessment (SEA) and planning processes in Ireland. Bringing together more than 100 public datasets, the tool allows planners to examine environmental considerations within their plan area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts, thus informing the identification of suitable development locations while protecting the environment.

Professor Sinead McGilloway was appointed to the *British Psychological Society (UK) Expert Reference Group on Children and Young People's Mental Health*. She is the only psychologist on the island of Ireland appointed to this group which has direct links to the UK government and public policy via the All Party Parliamentary group for Psychology. A number of policy briefings have been produced and disseminated as a result of this work. Professor McGilloway continues to represent MU on the Campus Engage Research Working Group and she is a co-author on a number of Campus Engage briefing papers related to engaged research.

It is important that the work of the institute is far reaching and includes civil society and policy makers. Staff and institute members contributed to 126 conferences throughout the year, many of which were on an international platform. Dr Tim McCarthy attended a successful first meeting of the new European Network of U-space Demonstrators, hosted by EUROCONTROL in November 2018.

U-Flyte hosted a workshop along with their partners from Intel. With over 30 attendees drawn from power, gas, road, and rail industries together with Irish technology solutions companies, discussion was focused on how to incorporate the latest sensor technology with drones to tackle challenges in monitoring critical infrastructure.

PUBLICATIONS

The Institute has a strong record in research publication. 2018 was another productive year with staff and Institute members publishing 10 books, 125 peer reviewed journals, 22 reports, 78 book chapters, 9 edited books, 34 conference publications and 85 'other' publications.

Two papers or co-authored by Institute staff feature in the Web of Science indicators for "highly cited" papers. Professor Rob Kitchin

was co-author of "Digital turn, digital geographies?" published in *Progress in Human Geography* (February 2018). This paper was cited 79 times up to January 2020.

A second paper co-authored by Professor Kitchin was placed in the top 1% of the academic field of Social Sciences as of October 2019. "The possibilities and limits to dialogue" published in *Dialogues in Human Geography* (2018) has received 13 citations to-date.

MEDIA

Institute staff and members had significant media participation/exposure during the year, including RTÉ Drivetime, Irish Times, Irish Examiner and BBC World Hacks. Topics discussed included Brexit, Commemoration, Gender Equality, Gender Based Violence, Electoral Politics, Drone Technologies, Housing, Family Life, the Irish Language, Planning.

FUNDED PROGRAMMES

Careful thought was given to capacity building in research and the funding supports provided by MUSSI, with two primary considerations. Firstly, that all schemes and awards are run on a competitive basis and are peer reviewed. Second, that the supports are structured to be progressive in nature, stretching from early career researchers to senior academic staff. A number of funding calls were launched throughout the year and funding was awarded to members across the various schemes. These included our seminar series, conference and workshop supports, Visiting Fellowship Scheme and Early Career Research Scheme.

The Institute hosted and supported in excess of 30 events (see www.maynoothuniversity.ie/social-sciences-institute) during the year including a Symposium on drone operations and applications led by Dr Tim McCarthy. The symposium aimed at professional drone operators, end-users of drone data/services, tech developers, entrepreneurs and regulators was co hosted with Trilateral Research and FlyRyte.

Our Visiting Fellowship Scheme is designed to enhance the research community of the University by fostering collaboration between the Institute Visiting Fellows and academic staff at Maynooth University. Fellowship recipients have the opportunity to engage with a vibrant research culture in the Institute and across the wider university, Dublin city area and the region. Ten visiting fellowships were awarded from a variety of disciplines including education, architecture, science and innovation, geography, anthropology and sociology.

In 2019, the Institute also launched an Early Career Research Scheme with seed funding awarded to four research streams. Current recipients are Dr Gareth Young and Dr Oliver Dawkins (NCG), Dr Sam Stehle (NCG), Dr Valesca Lima (Anthropology) and Dr Lindsay Black (Law).

ATHENA SWAN

The Director of MUSSI, Professor Linda Connolly, chaired and led the Maynooth University application for Athena SWAN accreditation. In April 2018, Maynooth University was awarded an Athena SWAN Bronze Institution Award in recognition of our progress, and our plans to accelerate change, towards gender equality. This is a welcome recognition of Maynooth University's collective institutional commitment to advancing gender equality and represents a key milestone for us at an important stage in the University's development. Maynooth University was the first institution in Ireland to apply for and achieve the Athena SWAN Bronze award under the expanded version of the ECU charter that includes Arts, Humanities and Social Sciences disciplines as well as Science, Technology, Engineering, Mathematics and Medicine. The University is also the first Irish institution to incorporate intersectionality as part of its Athena SWAN application, taking into account the numerous factors that can overlap with gender inequality, including the intersections between gender, race and ethnicity. Professor Connolly oversaw the implementation of the plan in the period before a new VP for Equality and Diversity was appointed. In 2018-19 the project team at AIRO developed a new Athena Swan dashboard. This project is due for joint launch with the HEA in 2020.

The institute continued to collaborate with the Digital Repository of Ireland consortium by leading the Irish Qualitative Data Archive and by co-applying for research funding.

AWARDS

Several staff and Institute members were recognised for their contribution by external awards:

- Professor Rob Kitchin was elected to the Academia Europaea in the Research Area of Human Geography. Professor Kitchin is one of 324 international scholars invited to accept membership in the four classes of humanities, social and related sciences, following a rigorous peer review.
- In collaboration with Maynooth Tidy Towns, Sinead McGilloway and the CMHCR received an Intel Pride of Place award for their work setting up a Maynooth Time Bank in an attempt to, amongst other things, promote a positive community spirit.
- CMHCR was shortlisted in the Irish Health Care Centre Awards – Research Team of the Year 2018.
- Dr Aphra Kerr received an IASH-SSPS/Digital Research Fellowship to visit the University of Edinburgh, Scotland.
- President Michael D Higgins presented Dr Mary Murphy with a warrant of appointment as incoming Member of the Council of State at the official event in Áras an Uachtaráin.
- The American Anthropological Association (AAA) presented a Presidential award to Dr Chandana Mathur for her leadership in uniting global anthropology under the World Anthropological Union.

- Professor John O'Brennan was awarded a Jean Monnet Chair by the European Commission.
- Two CMHCR members (both PhD students supervised by Sinead McGilloway) received MUSE Advanced Level awards for their community engagement work.

OTHER NEWS

Professor Linda Connolly delivered her Inaugural Lecture titled 'Ireland: No country for women?' This timely lecture explored critical questions about gender issues, equal citizenship and the kind of society Ireland is and has become. Professor Connolly gave several public talks in 2018-19, including on the intersection of the State's commemoration programme with gender issues and on gender equality in HEI's, she published newspaper articles on gender based violence and gender equality issue, and co-published a new paper on women and maternity leave in HEI's.

The Institute announced the appointment of two new Adjunct Professors: Professor Mary Hickman, Professor Emeritus of Sociology and Irish Studies at London Metropolitan University and Dr David Begg, who will work with Sean Ó Riain in Sociology and Michael Doherty in Law.

The Institute continues to play a central role in developing gender equality in conjunction with the four-year Athena SWAN action plan for the University. Professor Linda Connolly published with Maxwell, N. and Ni Laoire, C. in 2019 a paper on "*Informality, emotion and gendered career paths: the hidden toll of maternity leave on female academics and researchers*" in the Journal of Gender, Work and Organization. In this paper, it is demonstrated how despite legislative and policy advances with regard to gender equality in Ireland, female academics and researchers continue to face structural obstacles in their everyday work environments.

The Institute has participated in many more activities than are captured in this brief report. We are deeply committed in our efforts to combine cutting edge research projects with collaboration internally, nationally and internationally and continue to work at a high level to influence policy making, public discourse and capacity building in the social sciences inclusively understood. All of the members, PI's, researchers and staff in the institute are committed to enhancing Maynooth University as one of the leading centres of excellence internationally in the social sciences.

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MU KATHLEEN LONSDALE INSTITUTE FOR HUMAN HEALTH RESEARCH

The Kathleen Lonsdale Institute for Human Health Research was formally launched in November 2019. The Institute was named in recognition of Kathleen Lonsdale, a native of Kildare. Lonsdale was born in Newbridge in 1903 and at the age of 5 moved with her family to Essex. She majored in Physics and made pioneering findings in the use of x-ray crystallography for solving chemical, biological and medical problems. The institute was formally launched by Stephen Lonsdale, a son of Kathleen Lonsdale.

The integration of disciplines by Lonsdale to address health-related challenges lies at the very heart of the ethos and aspirations of the Kathleen Lonsdale Institute for Human Health Research in bringing together research that spans Biology, Chemistry, Psychology, Computer Science and beyond. The Institute offers a holistic, multi-disciplinary approach to the study of the key determinants of health, including the determining influence of biological, psychological, social, physical and environmental factors across the life course. Research particularly focuses on some of the major health problems of today, including healthy ageing and chronic inflammatory diseases, obesity and antimicrobial resistance.

In 2019 The Kathleen Lonsdale Institute for Human Health Research launched and supported a PhD scholars programme in human health research. Under the MU Doctoral Fellowship programme the Institute used resources from its Research Incentivisation Fund to leverage partnership funding from the MU Departments of Biology, Chemistry and Psychology and support the recruitment and research of 6 PhD scholars. External partnerships and co-funding with the Environmental Protection Agency (EPA) and The Mater Hospital facilitated recruitment of an additional 2 PhD students to the PhD scholar's programme. Institute funding of €318,000 leveraged additional internal and external funding of €433,000 to support delivery of the PhD scholar's programme. Applications for funding were led by Principal Investigators and assessed by an External Evaluation Panel.

For the period 2018-19, research groups in the Institute published a total of 146 publications, 97 of which were in peer-reviewed journals (research articles and reviews). Most of these publications were in peer-reviewed journals that are very well considered and respected in their fields of research (impact factors between 3 and 10; e.g. *Infection and Immunity*; *Journal of Immunology*; *New Phytologist*; *Genome Biology and Evolution*; *Scientific Reports*), with at least 5 publications in high-impact factor (>10) journals (*Journal of the American Chemical Society*, *Nature Communications*; *Nature Immunology*; *Nucleic Acids Research*, *Trends in Microbiology*).

Principal Investigators in the Institute had notable funding successes during the year with 3 major grants, each in excess of €250,000, being awarded. Details are included below.

- > Dr Joanne Masterson; SFI Future Research Leaders Award “Transcriptional Mechanisms Controlling Epithelial Cell Fate Determination during Allergic Esophageal Inflammation in Eosinophilic Esophagitis”) €1,250,714.
- > Dr Andrew Hogan; National Children’s Research Centre Crumlin; Childhood Obesity and Vaccine Responses; €234,459.
- > Dr Mark Robinson; HRB; The liver neighbourhood watch: regulatory tissue-resident natural killer (NK) cells protect against liver decompensation in patients with chronic liver disease; €475,969.

Dr Karen English was also awarded the IRC Early Career Researcher of the year award in December 2018 and Professor Paul Moynagh was elected to the Royal Irish Academy in May 2019.

The Institute was also influential in informing public policy. The EU performed an audit of the activities of the Irish government bodies in relation to antimicrobial resistance. Dr Fiona Walsh was invited by the EPA to present her research findings and discuss these with the European Centre for Disease Control DG-Sante. Dr Walsh is also a member of the Expert committee on AMR in Food, crops and the environment, Food and Agriculture Organization (FAO) of the United Nations. The report of the meeting held on the role of crops, biocides and the environment in food borne AMR was published this year (Expert committee member on AMR in Food, crops and the environment, Food and Agriculture Organization (FAO) of the United Nations).

In 2019 The Kathleen Lonsdale Institute for Human Health Research also prioritised support of Public Patient Involvement (PPI) in its research. This initiative is led by our Principal Investigator Dr Mark Robinson and other colleagues spanning a number of departments and Faculties in the university.

ASSISTED LIVING AND LEARNING INSTITUTE

The **Assisting Living** and Learning (ALL) Institute at MU, launched in November 2017, focuses on: Assisting Living, research to help people who may be challenged by disability, chronic illness, frailty or cognitive decline to benefit from the equitable application of technological, personal, community and societal initiatives, which assist and enable them to live a full life as valued participants of their community; and **Assisting Learning**, removing barriers to accessing and benefiting from education, especially at third level. Our mission is to enable people across their life course - especially those who have been marginalized - to achieve well-being in their preferred ways: including through the development and application of appropriate technologies, person-centred systems and evidence-based policies and laws, which empower users and those supporting them to understand and address living and learning challenges. We work with health and care services, civil society, and industry in Ireland; and with governments, industry, civil society and United Nations agencies across more than 50 countries.

MAJOR RESEARCH HIGHLIGHTS 2018/19

ALL was successful in securing multiple research funding awards in 2018-2019. Amongst these, H2020 funded 'Smart and Healthy Ageing through People Engaging in Supportive Systems' (SHAPES), a 4-year Innovation Action project including 36 partners across 14 countries, led and co-ordinated by ALL was awarded €21m by the European Commission; this is the largest EU grant for healthcare research ever led by an Irish institution. SHAPES focuses on large-scale integration of technology to support independence and enhance quality of life for older people. The consortium includes service users, industry, academia, hospitals, community service providers, disabled people's organisations, and civil society.

ALL was also successful in securing Science Foundation Ireland funding for the Centre for Research Training in Advanced Networks for Sustainable Societies, a doctoral training centre with MU supervisors drawn from STEM and Social Sciences disciplines, including Psychology, Electronic Engineering, the Hamilton Institute, Law, Mathematics and Statistics, and Sociology. This major initiative, with €18m worth of funding, is aimed at addressing the technical and societal challenges of connectivity between large numbers of People and Things. It is led at Maynooth by Dr Deirdre Desmond, co-director of ALL.

As key collaborators in AT2030, ALL aims to reach over 3 million people, testing new approaches and backing 'what works' to get assistive technology to those who need it. The consortium is led by the Global Disability Innovation Hub with funding of £20m, from UK Aid - Britain's Department of International Development. ALL's contribution to AT2030 is through establishing policies and systems across several low-income countries, to increase access to assistive technology for some of the most marginalized people

in the world. ALL does this through Action Research which is for and through the Ministries and stakeholders involved. The IRC/ Irish Aid-funded APPLICABLE project is addressing these issues specifically in Malawi; whilst another H2020 project funded to €7m Perform2Scale, is also using Action Research to scale service innovations in Ghana, Uganda and Malawi. In collaboration with the University of Tokyo and collaborators, ALL has researched users' experiences of assistive technologies among the 'oldest old'. Japan, as the world's leading aged society, offers a unique setting for addressing this research gap. ALL members also work on H2020 funded Coach Assistant via Projected and Tangible Interface (CAPTAIN) which uses micro projectors to provide a smart home assistant for older adults whenever and wherever it is needed, allowing them to continue living in their familiar homely neighbourhoods.

Through funding awarded via College Connect and the 1916 Bursaries Programme, ALL members have worked to enhance educational aspirations for those acutely under-represented through a participative and sustainable suite of activities and resources to illuminate pathways and provide opportunities into, through and beyond higher education. In addition, ALL members have been central in implementation of Turn to Teaching, a suite of three educational interventions designed to address specific barriers to Initial Teacher Education (ITE) and support the participation of the most marginalised groups to become teachers.

ALL is also home to Doctoral and post-Doctoral researchers funded from a range of other sources, including the H2020 Marie Curie Scheme, the Canadian Institutes for Health Research, the Irish Research Council, UK Aid and Maynooth's own Hume doctoral programme; constituting an international and dynamic environment of strongly engaged research.

OTHER AWARDS INCLUDE:

- > APPLICABLE: Assistive Product List Implementation Creating Enablement of inclusive SDGs. Mac MacLachlan, Ikenna Ebuenyi., COALESCE, Irish Research Council, 24 MONTHS from 1/4/19 for 350,000.
- > Perform2Scale –scaling-up human resource strengthening in Africa. Mac MacLachlan, Rebecca Murphy, H2020, European Commission, €267,932, starting 2017 and finishing 2021.
- > Scaling Impact of Inclusion, CAROLINE Marie Curie Fellowship Ana Maria Sanchez, European Commission, €233,913. Started 1/10/17 with end date 31/12/20.
- > AT2030 - Life Changing Assistive Technology for All. Mac MacLachlan, Emma Smith, DFID, UK via GDI Hub, 21 months, starting Nov 18 - July 20.
- > Canadian Institutes of Health Research Fellowship to Emma Smith, \$150,000, April 1, 2019 and March 1, 2020.

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- > Disability inclusion and structural change Holly Wescott, IRC, 2019 Government of Ireland Postgraduate Scholarship 1st Sept. 2019 for 3 years, €72,000.

PUBLICATIONS

In its first full year, ALL has created a substantial body of scholarship, this includes authored and edited books, book chapters and academic papers published in the following journals: Ethics and Behavior, BMJ Open, Technological Innovation and Entrepreneurship, BM Health Serves Research, Societies, Frontiers in Psychology, Ageing Research Reviews, Disability and Rehabilitation: Assistive Technology, Studies in Higher Education, Journal of Intellectual Disability Research, International Journal of Environmental Research and Public Health, International Perspectives in Psychology, Maritime Studies and PLOS One.

ALL members led and contributed to a series of position papers from the Global Research, Innovation, and Education on Assistive Technology (GREAT) Summit, held at the World Health Organization (WHO) headquarters in Geneva in 2017 which were published in a special edition of *Disability and Rehabilitation: Assistive Technology*.

IMPACT

ALL Institute influences decision makers

- > Mac MacLachlan attended the UK "All Party Parliamentary Committee on Assistive Technology", 26 March 2018.
- > ALL Institute contributed to new WHO Housing and health guideline: "Recommendations to promote healthy housing for a sustainable and equitable future", 27 November 2018.
- > All Institute submitted a response to the public consultation process for Ireland's new international development policy, 16 August 2018.
- > ALL Institute Researchers have supported the International Disability Alliance in the development of the "IDA Global Survey to Monitor the Participation of Disabled People's Organisations (DPOs) in Development Policies and Programmes", 04 December 2018.
- > All Institute provided a training workshop for the United Nations Partnership on the Rights of Persons with Disabilities (UNPRPD).

EVENTS

In addition to a monthly seminar series, ALL members were involved with a number of events in the university and beyond. These included: Jean Monnet Summer School, Launch of the Turn to Teaching Project, Higher Education Lifelong Learning in Ireland Network (HELLIN) Conference.

ALL INSTITUTE IN THE MEDIA

- > Katriona O'Sullivan appeared in an article in the Irish Times calling for changes to school scheme to boost outcomes for less well-off children, 6/2/18.
- > Matthew McCann was mentioned in the Atlantic in an article about accessibility apps and Smart Cities, 6/11/18.
- > Matthew McCann was identified as 'exciting new business talent' by the Independent Newspaper in an article entitled '30 under 30: From robotics to medtech to clothes-sharing - meet Ireland's young guns striving to break new ground' Sunday, 18/11/18.
- > ALL member, Derek Barter has article printed in RTE's Brainstorm "How the Communiversity introduces people to higher education", 12/1/18.

STAFF AND STUDENT ACHIEVEMENTS

Mohamed Maalim, PhD candidate, receives John and Pat Hume Doctoral Scholarship.

In 2018 ALL Director Professor Malcolm MacLachlan was awarded a Royal Irish Academy Gold Medal to recognise his outstanding contribution to the Social Sciences, and, his research into how psychological, social and technological factors can be used to make society more accessible for all, especially to people with disabilities.

Matthew McCann receives Innovation Award for Access Earth. Access Earth was given the award as one of the top forty Innovative Practices for Accessibility in 2018 from over 600 entries at the United Nations Zero Project.

RESEARCH INSTITUTES AND CENTRES

INNOVATION VALUE INSTITUTE

Founded in 2006, initially as a collaboration between Maynooth University and Intel, IVI is a multidisciplinary research centre with a focus on technology management and adoption, information systems and digital transformation. The institute was designated an Enterprise Ireland/IDA Technology Centre in 2010 and has since received two rounds of funding under this programme, which will cease in 2020. IVI has a strong track record of industry engagement and has developed a framework for technology management, the IT Capability Maturity Framework (IT-CMF), which has been used by over 300 organisations in both the public and enterprise sectors in nearly 50 countries worldwide.

In addition to the Enterprise Ireland Technology Centre Grant, IVI hosts a number of researchers from, and collaborates with a number of SFI research centres such as Lero, Confirm and ADAPT. The centre also hosts a number of researchers under the European Union Marie Curie fellowship programme.

Since its inception, the institute has attracted more than the €24m in competitive funding of which more than €10m (cash and in-kind) was from industry. In September 2019 the institute had 24 researchers and support staff.

In collaboration with its industrial partners and consortium members, IVI continued to develop and update the ITCMF framework. The framework consists of 37 critical capabilities (CCs) which cover all aspects of technology management.

In collaboration with Enterprise Ireland, IVI developed a Digital Technology Assessment and a supporting transformation programme for Small to Medium Enterprises (SMEs). This was piloted successfully with more than 20 SMEs.

The centre has also developed several readiness assessments which were updated or released during the 2018/19 academic period. These included assessments and associated content for: Digital Readiness, Cybersecurity effectiveness, DevOps and Cloud adoption. These assessments are being used both in Ireland and internationally.

IVI hosted a number of engagement events including the annual IVI Summer Summit, held in Maynooth University in June. Over 80 industry practitioners and academic delegates attended, with presentations from several industry and academic speakers, including a keynote presentation given by Professor John Mooney from Pepperdine University. The centre continues to facilitate the All Ireland Smart Cities Forum (AISCF). Over 100 delegates attended a conference held in Croke Park as part of this facilitation. In June 2019 a Collaborative Research Seminar was organised with UCD

New Modes of Engaging University Industry Collaborative Research as part of SFI Science Policy Project in June 2019. Keynote speaker was Alison Campbell from Knowledge Transfer Ireland.

The SFI funded research, led by Professor Brian Donnellan focuses on technology adoption.

The specific areas of research for the SFI centres are:

- Business model, and service innovation, with a particular focus on developing knowledge on platform design and governance in the contexts of industrial sensor-as-a-service, advanced manufacturing co-creation, fintech, and public experiment-as-a-service.
- Urban digital strategy, collaborating with all Irish cities where the focus is on the process of planning for, governing of, and scaling of technology in urban setting.
- Digital enterprise ecosystem management where the focus is on ecosystem structure, governance, and knowledge transfer through boundary spanning. The contexts studied are advanced communication networks and urban digital districts.
- Socio-tech, a study of the attitudes of the elderly to mobility and autonomous vehicle technology (AV) as input to AV user experience design.
- Ethics, where an ethics framework was developed for use by cities in their project management practices. This was developed in collaboration with Irish, Northern Irish and Swedish cities.

IVI is represented on range of expert groups and committees, see below for details. All work done with TC-428 and related committees is part of the EC policy drive for ICT Professionalism as part of the Digital Policy Europe. This provides a direct way for IVI expertise and research to be fed into the EC policy process and develop instruments for policy implementation through standard development and associated guidance and case studies development. The building blocks of the IT professionalism policy are: competences; education and training; bodies of knowledge; professional ethics. IVI is contributing either as an expert or as a stakeholder and reviewer in all these areas. IVI has also developed peer review publications arising from this policy work.

IVI has also contributed to the key policy area of the role and nature of academic industry collaboration in research and knowledge transfer. As a collaborator in the SFI Science Policy project with UCD, IVI has conducted 20 interviews with relevant stakeholders, organized a seminar, and published the results in peer reviewed conferences with future journal publications planned.

BOARD AND COMMITTEE MEMBERSHIPS

2019-current	Expert representative on advisory group for the European Commission project on High Tech Skills for Industry - Fostering New Services and Jobs Creation.
2019-current	Irish Steering Group member of Digital Skills and Jobs Coalition.
2017-current	Irish representative on CEN/TC-428 ICT Professionalism and Digital competences
2016-current	Member of NSAI mirror committee for CEN/TC 428 e-competences and ICT Professionalism.

In July of 2019, Professor Markus Helfert joined IVI and the Business School as Professor of Digital Services Innovation. His research interests include Information Management, Innovation, Cloud Computing, Service Science, Enterprise Architecture and Smart Cities and Smart Buildings. He collaborates with a range of Enterprises in relation to Innovation and IT Management. He is the Project coordinator of the H2020 Projects: PERFORM on Digital Retail and is the Chair of Steering Committee Elite-S H2020 Marie Curie Project on 'Future Leaders in ICT Standardisation for Europe'.

CENTRE FOR OCEAN ENERGY RESEARCH

The Centre for Ocean Energy Research is led by Professor John Ringwood of the Department of Electronic Engineering, and has been a designated research centre of the university since 2017.

PUBLICATION HIGHLIGHTS (CALENDAR YEAR 2018)

- > Overall, 32 papers published (18 journal papers, 14 conference papers).
- > High impact journals included:
 - IEEE Trans. on Sustainable Energy (IF = 7.65)
 - Applied Energy (IF = 8.426)
 - Renewable and Sustainable Energy Reviews (IF = 10.556).
- > Total of 875 citations for papers published in 2018.
- > 3 most cited papers:
 - High-fidelity numerical modelling of ocean wave energy systems: A review of computational fluid dynamics-based numerical wave tanks, C Windt, J Davidson, JV Ringwood, Renewable and Sustainable Energy Reviews 93, 610-630 [38 citations].
 - A high-fidelity wave-to-wire simulation platform for wave energy converters: Coupled numerical wave tank and power take-off models, M Penalba, J Davidson, C Windt, JV Ringwood, Applied energy 226, 655-669 [27 citations].
 - Comparing non-linear hydrodynamic forces in heaving point absorbers and oscillating wave surge converters, G Giorgi, JV Ringwood, Journal of Ocean Engineering and Marine Energy 4 (1), 25-35 [23 citations].
- > Full publication list at: www.eeng.nuim.ie/jringwood/publist.htm or scholar.google.com/citations?user=BYY-AUcAAAJ&hl=en.

GRANTS AND AWARDS (ACADEMIC YEAR OCT 2018-SEPT. 2019)

- > MaREI SFI research centre funding renewed for Phase II (currently 1 postdoc, 2 PhD students + 2 PhD vacancies).
- > No cost extension (NCE) awarded on SFI IA project SFI/13/IA/1886.
- > ISOPE 2019 best student paper award (plaque + \$990) for Parameterisation of Radiation Forces for a Multiple Degree-of-Freedom Wave Energy Converter Using Moment-Matching, by Nicolas Faedo, Yerai Pena-Sanchez and John V. Ringwood, selected from the 300+ student papers submitted to ISOPE 2019.

RESEARCH INSTITUTES AND CENTRES

- > Shortlisted (shortlist of 4) for best student paper prize at CAMS 2018 Faedo, N., Peña-Sanchez, Y. and Ringwood, J.V. Moment-Matching-Based Identification of Wave Energy Converters: the ISWEC Device, Proc. 11th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles (CAMS), Opatija, Croatia, 2018, pp 189-194.
- > H2020 funded project 'LiftWEC' announced - €3.25m in total, €341k to MU. 10 partners.
- > COER was recipient of incoming EU Marie Curie Fellow Bingyong Guo, circa €200k.
- > 2 graduating COER PhD students, Alexis Merigaud and Giuseppe Giorgi, were awarded MSC Fellowships to Institute Marie and Pierre Curie (Paris) and Politecnico di Torino, respectively. Josh Davidson (postdoc with COER) also received a MSC Fellowship to Budapest University of Technology and Economics (Hungary).

NON-ACADEMIC AWARDS, INDUSTRY COLLABORATIONS, ACADEMIC COLLABORATIONS, EPE ACTIVITIES (ACADEMIC YEAR OCT. 2018-SEPT. 2019)

- > WECCOMP – competition launched by COER to optimise the loading of a WEC to maximise power capture. This was open to the wave energy community at large. (www.eeng.nuim.ie/coer/wec-control-competition-released/).
- > MoU signed with Quilmes University to pipeline prospective PhD students through interns.
- > Negotiated contracts with Corpower and Wave Venture under the MaREI industry funding scheme to secure funding for PhDs.
- > EPE activities included Science Night, with ~400 children and parents having access to interactive mini-wave tanks.

ICARUS CLIMATE RESEARCH CENTRE

In calendar year 2018 ICARUS staff and students published a total of 26 peer reviewed papers on various aspects of climate science. Highlights include:

- > A Nature News and Views piece by Gerard McCarthy and Peter Thorne.
- > A piece led by the MSc Climate change students on university student participation in citizen science projects.
- > A paper led by PhD candidate Ciara Ryan on the highly successful third year undergraduate assignment that has led to the digitisation of several thousand years' worth of early Irish daily rainfall records in collaboration with Met Eireann. This analysis has since been taken up by academics in the UK, USA and Australia who are undertaking their own classroom-based data rescue activities.
- > A new 305 year Irish rainfall record analysis led by Dr Conor Murphy which received considerable national media attention.

Pieces were published in a broad range of journals including those of the leading societies in the domain area: the EGU, AGU, AMS and RMS.

OVER 2018-2019 SEVERAL NEW GRANTS WERE AWARDED TO ICARUS. NEW GRANTS AWARDED IN THIS PERIOD INCLUDE:

- > Marine Institute A4 grant.
- > Oireachtas Committee expert advisors contract.
- > Various Environment Protection Agency awards.
- > Office of Public Works.
- > Welcome Trust.

In addition three EU Copernicus Climate Change Service grants were extended into new service contracts over 2018-2019.

ICARUS staff were engaged as expert advisors to the Joint Oireachtas Committee on Climate Action over 2018-2019 culminating in the publication of the report in March 2019. As expert advisors we aided the clerk and the committee chair to line up appropriate speakers and witnesses and structure the proceedings. We were able to secure testimony from Professor Peter Stott (acting head of Met Office Hadley Centre), Professor Valerie Masson-Delmotte (Co-chair of IPCC WG1), and Lord Deben (Chair of the UK's Climate Change Committee). ICARUS staff provided a first draft of the full report and aided via private discussions the committee members and their advisors in the finalisation of the report.

ICARUS staff continue to be active nationally and internationally within the broader climate science community. Peter Thorne has continued in the role of Coordinating Lead Author for the IPCC

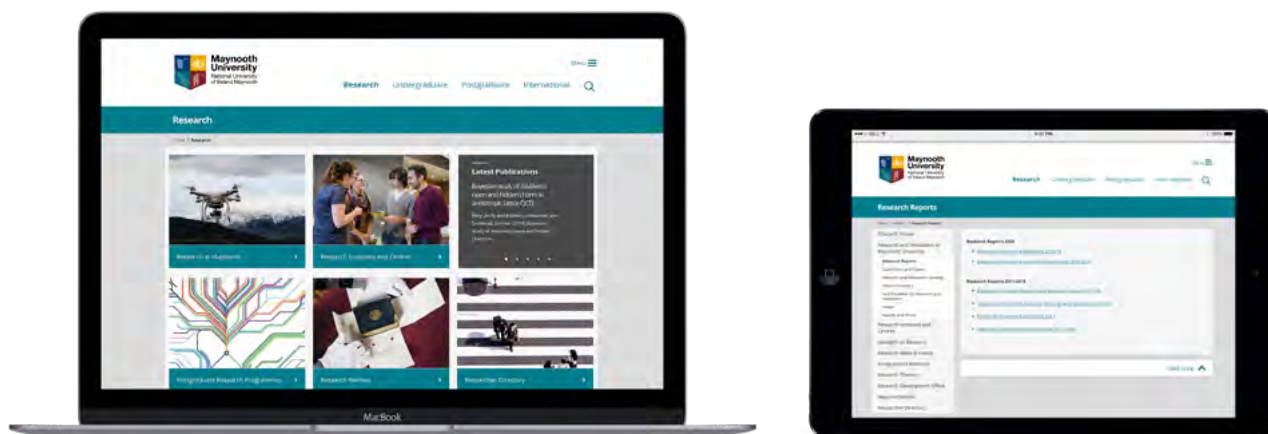
RESEARCH INSTITUTES AND CENTRES

WG1 report in the sixth assessment report cycle. In addition he attended the IPCC synthesis report scoping meeting in Singapore as one of 60 selected international delegates. Peter Thorne was also selected as the new chair for the Global Climate Observing System Atmospheric Observations Panel for Climate. Conor Murphy continued to serve on the Climate Change Advisory Council's Adaptation panel.

ICARUS staff continue to have a high profile in national and international media. Staff were regularly quoted in national media outlets on numerous topics. An article in the Irish Independent that heavily featured Peter Thorne was retweeted by Mark Ruffalo (AKA the Incredible Hulk). Internationally ICARUS staff were quoted in Time, the Washington Post and on the BBC website. ICARUS staff were heavily involved in the development of the RTÉ Climate Action week events and participated in many of the TV and radio programs associated with it.

APPENDIX

A full list of MU publications and external funding awards for 2018/19 can be found at:
<https://www.maynoothuniversity.ie/research/research-and-innovation-maynooth-university/research-reports>



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**Maynooth
University**
National University
of Ireland Maynooth

Maynooth University
Research Development Office
Maynooth, Co. Kildare,
Ireland, W23 X021

☎ + 353 1 708 6682

✉ research.development@mu.ie

🖱 www.maynoothuniversity.ie/research

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