



NUI Galway
OÉ Gaillimh

FOCUS ON RESEARCH AT NUI GALWAY

research

MATTERS

10

A VISION TO 2020

THE INTERNATIONAL YEAR OF LIGHT

THE BEAUTY OF BIODISCOVERY

CREATING IRELAND - LEARNING FROM HISTORY

**ADVANCING PUBLIC POLICY TO COMBAT VIOLENCE
AGAINST WOMEN AND GIRLS**

ISSUE 10 SPRING 2015

Editorial Board

EDITOR

Natalie Walsh

EDITORIAL ASSISTANT

Deirdre Whelan

EDITORIAL BOARD

Maria Barrett

Ena Brophy

Declan Devane

Ruth Hynes

Bryan McCabe

Alexander Rahm

Martha Shaughnessy

Angela Sice

Dagmar Stengel

John Waddell

Ekaterina Yahyaouikrivenko

From The Editor

Gender Equality: A time for positive change

Welcome to the 10th edition of Research Matters. This issue focuses on the future of Research at NUI Galway. Our newly launched Strategic Plan sets out our vision for NUI Galway to 2020, this vision is ambitious, exciting and challenging. It would be impossible to write this editorial without addressing the issue of gender equality and how we are working towards positive change. Outlined in this editorial are key developments that will contribute towards this positive change; towards a stronger and more diverse NUI Galway.

NUI Galway is fully committed to achieving equality of opportunity for all staff, irrespective of their gender. The University has taken a number of positive steps in recent weeks to ensure real and positive change on this issue. We now have a unique opportunity to address gender discrimination across the University in proactive and lasting ways. We can be confident that the University's new Strategic Plan, the establishment of the Task Force on Gender Equality, and our involvement in the Athena Swan programme for women in research and higher education, will set realistic but stretching targets to move towards greater gender equality.

Gender Equality Task Force

The first meeting of the Task Force on Gender Equality was held in March, and chaired by Professor Jane Grimson, former Vice-Provost of Trinity College Dublin. The Task Force has 17 members drawn from inside and outside the University, including 11 women. They represent a broad spectrum of expertise and different perspectives, and include leading experts in the fields of equality and diversity. The Task Force reports to the Governing Authority but its work is independent to the University - it will set its own terms of reference, and make recommendations across a range of policies, procedures and work culture as it sees fit.

Athena SWAN

Athena SWAN is a UK-based initiative set up to help advance the representation of women in science, technology, engineering, medicine and mathematics (STEMM). In 2015, following a drive by

Irish universities involving colleagues at NUI Galway, Athena SWAN was extended to Irish institutions for the first time – and our University was one of the first to make a submission. We have already signed the Athena SWAN Charter, and a Self-Appraisal Team has conducted a critical self-assessment of our gender policies and practices, warts and all. This assessment identifies where we are regarding gender equality in quantitative (staff and student data) and qualitative (policies, practices, systems and arrangements) terms. Following the self-assessment process a plan for action will be created that embeds the principles of the Athena SWAN Charter in the University's organisational structure.

A Wider Issue

Minister for Education and Skills, Jan O'Sullivan, has broadly welcomed NUI Galway's move on these two initiatives, saying she was satisfied that the University is being proactive in dealing with gender discrimination. In March, she told the Seanad that the University was "at the forefront of the universities sector in this respect". Indeed, we are not unique in receiving critical findings and media attention on gender inequality. Nor is this an Irish-only problem: striking gender imbalances within the upper levels of staff in higher education have been recorded worldwide for many years. In Ireland among senior academic staff, 81 percent in universities are men, and 71 percent in Institutes of Technology, according to the 2012 Higher Education Authority (HEA) statistics. The tide is, however, changing.

Get Involved

A new website has been launched to keep you informed and updated on our progress on gender equality. You can get detailed information on the Task Force and Athena SWAN, answers to some FAQs, and Latest News updates at: www.nuigalway.ie/genderequality Both the Task Force and the Athena SWAN Self-Appraisal Team will be consulting widely with staff in the process of their work. Make sure you have your input into an issue that effects all of our work lives.

Natalie Walsh

Editor, Research Matters

Welcome from the Vice President for Research



Welcome to issue ten of Research Matters. Research at NUI Galway is thriving, we have seen significant research successes across our funding awards, our publications and citations and our industry partnerships. NUI Galway was awarded three ERC Starting Grants this year and we look forward to working with Professor Martin O'Donnell, Dr Martin O'Halloran and Dr Eilionoir Flynn as they begin their ERC journey's.

This month we launched our new Strategic Plan to 2020. This plan will shape the future of Research at NUI Galway. As custodian for Research at NUI Galway, I am confident in our ability to deliver our key objectives of the plan and look forward to seeing the opportunities created for NUI Galway as a result of our vision to 2020.

From an international perspective we are creating dynamic new partnerships across this globe. In this edition we feature our recent memorandum of signing with Tsinghua University in China and our thriving ISCA Japan Programme which focuses on Cross-Border Collaborations with Ireland and Japan.

Finally, Research and Innovation at NUI Galway have just launched a new video which captures our dynamic and vibrant ecosystem. A copy of our new production is available online at:

www.nuigalway.ie/our-research

Professor Lokesh Joshi
Vice President for Research, NUI Galway

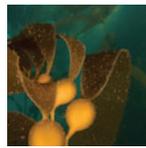
Contents



Opinions and Perspectives:
Dr James Browne

NUI Galway's President reflects on strategic plans past, present and future.

02



The Beauty of Biodiscovery

A closer look at NUI Galway's collaborative role in the development of marine biotechnological resources.

04



NUI Galway and TSINGHUA University in historic Collaboration Agreement

NUI Galway signs agreement with leading Chinese University during President Higgins' state visit.

08



Learning from History and Creating Ireland

Dr Kevin O'Sullivan on learning from the past and shaping the future of development aid in Ireland.

16



Professor Kevin Boyle: Human Rights Scholar-Activist or Activist-Scholar

The Hardiman Library launches the Professor Kevin Boyle Archive.

20

Also In This Issue...

| | |
|--|----|
| Engineers Ireland Excellence Awards 2015 | 7 |
| President Higgins announced as Patron of Year of Light | 10 |
| Trial Methodology Research Network (HRB-TMRN) at NUI Galway | 14 |
| Cancer Research wins European Association for Cancer Award | 18 |
| Major ERC Funding Success for NUI Galway | 19 |
| Advancing Public Policy to Combat Violence Against Women and Girls | 34 |
| Translation of Principal Investigator Knowledge (TOPIK) | 38 |
| EVOSS Cloud 2014 Event | 39 |

Regular Features...

| | |
|-----------------------|----|
| RESEARCH PROFILES | 12 |
| RESEARCH IN FOCUS | 22 |
| RESEARCH BYTES | 24 |
| WORD ON THE TWEET | 36 |
| RESEARCH PUBLICATIONS | 40 |

OPINIONS & PERSPECTIVES



AS NUI GALWAY LAUNCHES ITS NEW STRATEGIC PLAN DR JAMES J BROWNE, PRESIDENT OF THE UNIVERSITY SETS A VISION FOR NUI GALWAY TO 2020.



Opinions & Perspectives: Dr James Browne



As we approach the University's 175th birthday in 2020, we can be truly proud of our recent success. We are

recognized around the globe in terms of the impact of our teaching and research, in particular in our consistent rise in international rankings. In strengthening our position as a research-led university with global reach, we must retain the unique values that define NUI Galway. We must continue to work together with determination, confidence and ambition. The next five years will bring forward many exciting opportunities, opportunities we must be ready to take, to harness and capitalize on.

Over the past ten years, we have achieved national leadership and growing international recognition for the quality of our research in our priority areas. With this growing profile, we will continue to pursue an ambitious internationalisation agenda. Over the lifetime of our new Strategic Plan, we will maximise the potential of our research to have global impact and significantly enhance our international profile. We aspire to be a top 200 university by 2020, attracting the best students, teachers and researchers, and creating a network of relationships of substance that span the globe.

It is impossible to comment on every individual research success we have witnessed in the past five years, the launch of new SFI funded Research Centres at NUI Galway, Insight and Cúram are critical to the ongoing research success of NUI Galway are



➤ ABOVE: NUI Galway's Vision 2020 Strategic plan.

certainly two notable milestones in the expansion of the University's impressive research programme. As is the building and accreditation of a stem cell manufacturing facility where we now have the infrastructure, people and funding to make a serious impact on the med tech research industry sector in Ireland. This is the only facility of its kind in Ireland one of less than a dozen across Europe. NUI Galway has also been awarded six ERC starting grants and one ERC consolidator grants. I commend every one of our recipients, Professor John Laffey, Dr Laoise McNamara, Dr Gavin Collins, Professor Martin O'Donnell, Dr Martin O'Halloran, Dr Eilionoir Flynn and Dr Maire Louise Coolahan (ERC-CoG) on their research, their ambition and their commitment to NUI Galway.

As we look to our next five years our strategic plan sets out in detail

our ambitious vision for the future – describing our programme of activities, and articulating the values and ideas that underlie those activities. The plan has been written with and for our University community following extensive consultation, with input and ideas from across the campus and far beyond. The extensive engagement throughout the planning process shows a shared ambition for our University to succeed.

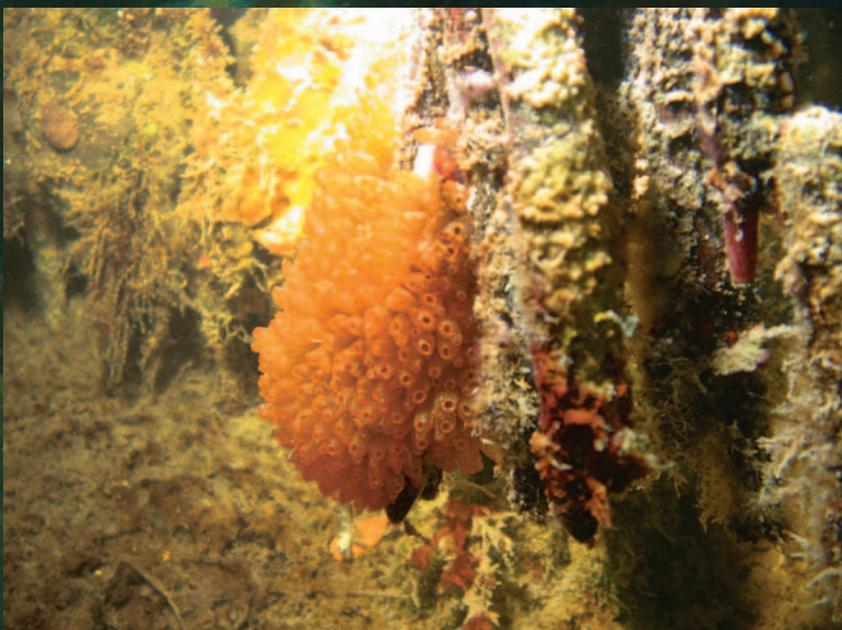
I extend my thanks to everyone who was involved in devising this Plan, and all those who took the time to share their vision for NUI Galway in the process. This strategy builds on a platform of success, and a long tradition of facing the future with ambition. I look forward to working with you in achieving our vision.

JAMES J. BROWNE, Ph.D., D.Sc., MRIA, C. Eng.
President

“ Over the lifetime of our new Strategic Plan, we will maximise the potential of our research to have global impact and significantly enhance our international profile. We aspire to be a top 200 university by 2020, attracting the best students, teachers and researchers, and creating a network of relationships of substance that span the globe. ”

NUJ GALWAY IS PART OF A NATIONAL EFFORT SEEKING TO DEVELOP MARINE BIOTECHNOLOGICAL RESOURCES. THROUGH PROGRAMMES LIKE THE BEAUFORT BIODISCOVERY AND NUTRAMARA PROJECTS, IRELAND'S ISLAND CHARACTER OFFERS MARINE BIODIVERSITY THAT IS LARGELY UNDER-STUDIED AND UNDER-EXPLOITED. BILL BAKER FROM THE BAKER LAB IN THE SCHOOL OF CHEMISTRY IN NUI GALWAY SHARES HIS EXPERIENCES IN BIODISCOVERY IN THE WEST OF IRELAND.

The Beauty of Biodiscovery



▲ ABOVE: The tropical mangrove tunicate *Ecteinascidia turbinata* is the source of Yondelis, a natural product recently approved by the US Food and Drug Administration (FDA) and the European Commission for treatment of soft tissue sarcoma and ovarian cancer. (Photo B. Baker)

P

Plants are well known sources of natural products, a term chemists use to describe the small molecules plants make for purposes such as defence against predators, attracting pollinators and decreasing competition for space. Bitter principles found in many plants, for example, can deter herbivores in your garden, and aromatic terpenes attract honeybees. Ever the innovator, humans have exploited these properties throughout their evolution and today we find plant natural products in our foods, medicines, cosmetics and even textiles. Next time you enjoy vanilla in your coffee mocha, appreciate that the Mexican orchid *Vanilla planifolia* merely intended to invite the tropical bee *Melipona* to its flowers and had no interest in your coffee break pleasures. Interestingly, most drugs currently used are natural products or are synthetic chemicals inspired by natural products.

Perhaps not surprisingly, plants are not the only producers of natural products. Bacteria and fungi have been similarly exploited, more for medicines (think penicillin, tetracycline) than foodstuffs (think beer, cheese). But less exploited are natural products from our oceans. Certainly Tyrian Purple, from *Murex* marine snails, qualifies as a classic example, prized from time immemorial for the intense and lasting colour it brought to materials. But humans have spent less time underwater than they have in forests and on savannas, so our knowledge of the properties of marine plants and animals did not fully develop until the advent of safe and effective underwater diving equipment. Marine scientists were some of the early adopters of the Aqua-Lung, Jacques Cousteau's famous invention, and the field of marine natural products has blossomed since the 1970s.

That sponges and sea squirts could cure human diseases may surprise those who have not spent time underwater. However, just like plants, many marine animals like sponges and sea squirts are attached to their location and cannot flee predators or competitors and, just like plants, they use natural products as toxic and noxious deterrents toward these environmental dangers. Because we have only been studying these marine natural products for a few decades, and certainly drug discovery takes multiple decades to discover and develop a single new drug, we have only recently seen marine natural products advance to clinical use. Nonetheless, there is considerable expectation that further development of these marine resources will follow.

NUI Galway is part of a national effort seeking to develop marine biotechnological resources. Through programs like the Beaufort Biodiscovery and NutraMara projects, Ireland's island character offers marine biodiversity that is largely under-studied and under-exploited. The Baker lab in the School of Chemistry has been working with a number of groups across campus, Grace McCormack in Zoology, Mark Johnson and Dagmar Stengel in the Ryan Institute, Ger Fleming in Microbiology, Howard Fearnhead in Pharmacology, and Mary Murphy in the Remedi Regenerative Medicine Institute, to name a few, to develop a collection of marine invertebrates, algae and microbes and to screen those organisms against disease models. But indeed, the effort is national, with further collaborators at the MI, UCC, QUB, UCD, Teagasc and UL, and extends overseas to institutions that provide cutting edge support services that enhance our ability to discover new marine bioproducts. >>>

THE BEAUTY OF BIODISCOVERY

«« Marine biodiscovery starts at the high tide mark and requires getting wet. Our teams from Zoology and the Ryan Institute make regular forays onto the low-tide sea shore, where we find a variety of sponges, sea squirts, molluscs and algae. Alternately, we collect samples using scuba and/or ship-based trawling or ROV equipment. As finding new natural products with drug-like properties is akin to finding a needle in a haystack, we need many marine organisms (straws) to find the one that has the drug (needle), so we spend significant amount of effort on sample collections.

Back in the lab, bits from each marine organism are prepared for determination of their bacteria and fungal content. Separately from the sponges and sea squirts, we culture marine microorganisms we obtain and treat each as a source of natural product drugs (straws). Because we can obtain a dozen or more microbes from each marine animal or plant, we significantly increase our chances of finding important new natural products.

The marine animals and plants are extracted with solvents. This is not unlike the way you prepare tea or coffee - with hot water as your solvent, you extract all the natural products (caffeine, flavours) from the plant material. If you leave your cup sit unattended for a couple of weeks so the water evaporates, you will find a sticky residue on the bottom. Those are the natural products themselves. We do the same thing with our marine animals and plants, just with different solvents, and our techniques remove the solvent more quickly. But the residue we are left with contains all the natural products from our marine animals and plants. These natural product mixtures are tested by our collaborators for drug-like properties, and if we find activity, we separate the individual natural products from the mixture and re-test them to see which one had the activity. In this way we end up with purified natural products with well-defined drug-like properties.

Often with natural products, chemists try to make the drug-like properties



▲ TOP: Low tide in New Quay is an opportunity for the Beaufort project to collect sponges, tunicates, molluscs and algae. (Photo J. Baker)

▲ ABOVE: Scuba diving for marine plants and animals at the Maharees Islands on the north coast of the Dingle Peninsula. (Photo R. Young)

better, an approach known as medicinal chemistry. In this case, we conduct studies to make small changes to the chemical structure of the natural product, then re-test the properties. It is just as important to us at this level of development that potency improves, but also pharmacological properties like bioavailability and toxicological profiles. It is this iterative process that ultimately leads to a drug lead for evaluation in animals and humans. Perhaps it is more clear now that this endeavour can take one to two decades before a small molecule is ready for human use.

Irish waters are largely untested in the biodiscovery context. The

complex biogeography that includes deep water plateaus and trenches, coastal archipelago's, and fjord-like inlets are home to a rich biodiversity, a biodiversity whose ecological interactions over millions of years of evolution will have produced unique natural products capable of serving as drugs and/or models for drugs. It is this promise that motivates the Beaufort Biodiscovery and NutraMara researchers and perhaps one day will transform the way all Irish view these beautiful waters that surround the Emerald Isle.

By NATALIE WALSH
Research Office



➤ ABOVE: L-R Niamh Shaw, Pat O'Doherty, Chief Executive ESB; Aine Brazil, International Engineer of the Year, and John Power, Chartered Engineer, Director General, Engineers Ireland at the fifth annual Engineers Ireland Excellence Awards. (Photos: Naoise Culhane).

◀ LEFT: Martin O'Halloran, Engineers Ireland Chartered Engineers of the Year.

NUI Galway Shines a Centre for Engineering Excellence at Engineers Ireland Excellence Awards



NUI Galway shines as a centre for engineering excellence as two of its graduates and pioneers in engineering received awards at the Engineers Ireland Excellence Awards.

Martin O'Halloran, Electrical and Electronic Engineering, NUI Galway was awarded the prestigious Chartered Engineer of the Year award and Aine Brazil, Vice Chairwoman of New York firm, Thornton Tomasetti, New York was awarded the International Engineer award.

Martin was awarded for his leadership and contribution to the project 'Exploring New Frontiers in Breast Cancer Detection using Microwave Imaging'. The project is focussed on discovering alternatives in breast cancer detection using microwave imaging. Dr O'Halloran is currently developing a prototype breast imaging

system at NUI Galway. Martin who has an engineering degree and PhD is currently completing a master's of science in clinical research. In addition to the many awards and accolades he has earned, Martin is the youngest ever successful proposer of a European Cooperation in Science and Technology Action (COST) in which he is leading a network of over 160 European researchers from 24 countries who are bringing new microwave-based medical devices from research bench to patient bedside.

The International Engineer of the Year award was presented to Aine Brazil from Salthill who is a chartered engineer and Vice Chairwoman of New York engineering firm, Thornton Tomasetti, which employs over 800 people. Aine, who has led projects which now shape the New York skyline is a graduate NUI Galway, what was then known as University College Galway, and has also

been named as one of New York's '100 Most Influential Women in Business'. Aine, who is based in New York, is currently involved in largest private real estate development in US history named, 'Hudson Yard'. Currently under construction, it is challenging both for scale and complexity with towers up to 400 metres tall being constructed over rail tracks and a platform to support 13 acres of plaza and parks.

Martin was one of six, out of 470 chartered engineers, in the running for this award and it is a fantastic achievement to have won. He is a fine example of the engineering talent that exists in Ireland today. Aine, who has carved out a phenomenal career in New York, is a testament to the reputation of NUI Galway engineering graduates abroad.

By ENA BROPHY
Research Office

ON THE 9TH DECEMBER 2014, NUI GALWAY AND TSINGHUA UNIVERSITY, BEIJING SIGNED A HISTORIC AGREEMENT TO COLLABORATE ON EDUCATION AND RESEARCH. THE EVENT WAS WITNESSED BY PRESIDENT MICHAEL D. HIGGINS.

NUI Galway Signs Agreement With Leading Chinese University During President Higgins' State Visit



NUI Galway signed an agreement on Tuesday, 9 December, with Tsinghua University in China, to collaborate on both education and

research activities. The signing of the Memorandum of Understanding was witnessed by President of Ireland, Michael D. Higgins, and President of China, Xi Jinping, in The Great Hall of the People in Beijing, immediately prior to the State Banquet to mark the visit.

Both national Presidents have links to the universities as President Higgins is an alumnus of NUI Galway, while President Xi graduated from Tsinghua University. Dr Jim Browne, President of NUI Galway, and Ms Chen Xu, Chairperson of Tsinghua University Council, signed the Memorandum of Understanding on behalf of their respective universities.

The agreement features: joint research in the fields of mutual interest to

both universities; exchange of faculty members and researchers; exchange of students; joint organisation of seminars and academic meetings; exchange of materials in education; and research, publications and academic information.

Science and engineering research and teaching is a particular strength for both universities. For the academic year 2015/16, a plan for undergraduate engineering student exchange and increased post-graduate mobility has been agreed.

The agreement follows on from existing close ties between the universities. In research, a significant three-year EU project on cancer biomarkers led by NUI Galway, with Tsinghua University as a partner, has just come to completion. Also in research, 27 Tsinghua graduates have come to NUI Galway to pursue postgraduate degrees over the last two decades. In addition, several senior academic positions at Tsinghua

University are held by NUI Galway graduates, and Tsinghua University alumni teach at NUI Galway.

NUI Galway's President Browne, has supervised many Tsinghua University graduates who have come to NUI Galway as PhD and masters students in the area of industrial engineering. Commenting on the agreement he said: "This is a historic agreement, which builds on a long tradition of educational exchange between NUI Galway and Tsinghua University, particularly in the area of Engineering. With this signing we look forward to deepening our collaboration, resulting in great student mobility between the two universities at undergraduate and post-graduate levels, as well as building new partnerships on a range of research fronts. It is especially fitting that this agreement is signed in the presence of the national Presidents, both of whom are alumni of the respective universities."

The signing took place during the State Visit of President Michael D. Higgins to

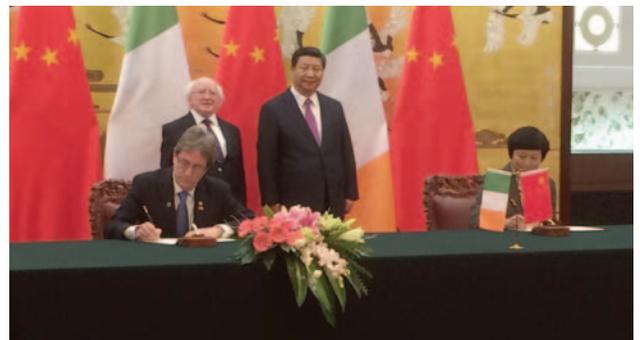


China. This is the first State Visit since 2003. Accompanying the President on this three city visit to Beijing, Shanghai and Hangzhou, were the Minister for Finance, Michael Noonan, T.D. and the Minister for Foreign Affairs and Trade, Charlie Flanagan, T.D. The visit aims to deepen the political, cultural, business, scientific and educational relationships between the two countries. The President was accompanied by Sabina Higgins.

Dr Jim Browne travelled as part of the delegation on the State Visit, following the invitation from Enterprise Ireland to the International Office of the Irish universities. He was accompanied by colleague, Professor Brian Hughes, Dean of International Affairs.

NUI Galway has a very strong Alumni Group in Beijing, made up of alumni and member of the Irish expat community.

By RUTH HYNES
Press and Information Office



⤴ ABOVE: Pictured signing an agreement to collaborate on both education and research activities are Dr Jim Browne, President of NUI Galway, and Ms Chen Xu, Chairperson of Tsinghua University Council. Witnessing the signing, which took place in The Great Hall of the People, are President Michael D. Higgins and President of China, Xi Jinping.

“ This is a historic agreement, which builds on a long tradition of educational exchange between NUI Galway and Tsinghua University, particularly in the area of Engineering. ”

President Higgins Announced as Patron of Year of Light

THE UN HAS DESIGNATED 2015 THE UNESCO INTERNATIONAL YEAR OF LIGHT AND PRESIDENT OF IRELAND, MICHAEL D. HIGGINS, HAS BEEN ANNOUNCED AS THE LIGHT2015 IRELAND PATRON.



NUI Galway is coordinating Ireland's involvement and a series of events will take place across the country, and

schools will be invited to learn more about the science of light and the contribution of light to our communities.

Leading this initiative in Ireland is Professor Martin Leahy from NUI Galway and he is the recipient for two funding awards from the European Union for these efforts. "Light particles, or photons, are harnessed for use in the world around us. Photonics is the science and technology of generating, controlling, and detecting photons. Photonics underpins technologies of daily life from smartphones to laptops to the Internet

to medical instruments to lighting technology. We have truly entered the Photonics Era."

"We are delighted to have such high profile patron and distinguished orator supporting our efforts to promote the Year of Light in Ireland. Ireland has a rich history of light science and engineering from Newgrange 3200 BC to the modern scientific discoveries of Stokes, Hamilton, Joly, Jellet and Tyndall among others. The President's reputation in social justice and the arts will assist us in bringing the power of light to a much wider audience."

LIGHT2015 represents a unique opportunity to marry science, engineering, medicine and the arts - particularly cinema and the fine arts. As part of the International Year of Light, children will have the chance to have their art projected onto walls in city centre locations and app enthusiasts will get access to new apps.

"We are no longer in the electronic age, the 21st century is all about harnessing light through photonics. Water treatment, the internet, cinema, the fine arts, scientific discovery as well as medical diagnosis and therapy - all use photonics. This is what we want to celebrate during 2015," added Professor Leahy.

Recent recognition by Science Foundation Ireland through the award of €30 million to establish the Irish Photonics Integration Centre, and a previous award from the Higher Education Authority of €30.5



➤ To watch a video about the International Year of Light 2015 click here: <https://youtu.be/rcoMeWV0jZc>

million for the National Biophotonics and Imaging Platform, demonstrate its continuing importance to Ireland and the Irish economy.

Photonics is also recognised by the Irish Government as one of the six platform technologies and is directly underpinning many of the identified research priorities and, more recently, the €7 billion partnership between Photonics21 and the European Commission will have a substantial impact on future growth and job creation, and significantly assist the EU's continued economic recovery.

LIGHT2015 is a global initiative adopted by the United Nations to raise awareness of how optical technologies promote sustainable development and provide solutions to worldwide challenges in energy, education, agriculture, communications and health.

For more info visit: www.light2015.ie



➤ President of Ireland, Michael D. Higgins, has been announced as the LIGHT2015 Ireland Patron

RIGHT: Leading the LIGHT2015 >>
Ireland initiative in Ireland is
Professor Martin Leahy from NUI
Galway. Photo by Aengus McMahon.



The International Year of Light



**INTERNATIONAL
YEAR OF LIGHT
2015**

Light was necessary to activate the first building blocks of life on Earth. It has existed longer than atoms and molecules. Indeed science and many religions, including Christianity and Islam, describe creation as beginning with the separation of darkness from light. As more complex molecules like porphyrins formed in the billions of years after the Big Bang, light from the sun could be harnessed through absorption and photosynthesis as the energy source for the building blocks of life. This allowed the production of self-replicating molecules, RNA and DNA and life eventually developed on earth about 3.5 billion years ago. It may have occurred elsewhere in the universe, but we simply don't know. Man seems to have understood the importance of light from the outset. Here in Ireland, 600 years before the earliest pyramids in Egypt, Neolithic people built a huge lightbox at Newgrange to mark the winter solstice - the time when the days would stop getting shorter and would again get longer - perhaps in fear that the light would disappear. The monument still works much as it was designed to do and has only lost a few minutes.

Light remains the main energy source. Apart from a few small exceptions such as tide and geothermal (not ground-source), all the energy we use comes from the sun. It is captured by plants and animals which decay to provide fossil fuels, it drives the wind and rain etc. So light is necessary for the food we eat, TV, movies, art, the internet, medical diagnosis and treatment, measuring distance and time, and seeing the stars on a frosty evening. Indeed now that the internet is almost ubiquitous and there are as many mobile telephones as people, electronic signals are no longer fast enough. The only way to ensure we have uninterrupted phone calls, video chats and streaming movies is literally to send the information at the speed of light - enter the photonics age.

Light is essential to life, to our lives. In fact light has become so important that the United Nations declared 2015 the International Year of Light. There will be many events across Ireland and throughout the world to celebrate LIGHT2015. Check www.light2015.ie for more details.

By **PROFESSOR MARTIN LEAHY**
College of Science

PROFILES



PATRICIA MCHUGH

**Postdoctoral Researcher,
Marketing Discipline and the
Whitaker Institute.**

Patricia McHugh has come through the ranks at NUI, Galway having completed her B.Comm Degree and Masters in Business Studies specialising in Marketing at the University. During her postgraduate studies, Patricia was awarded two prestigious marketing fellowships from Thermo King Ireland and NUI, Galway for achieving first place in the Marketing Specialisation of the B.Comm Degree.

In 2008, Patricia was awarded PRTL14 funding from the Whitaker Institute to undertake a four-year PhD in the area of science communication. Patricia's doctoral research integrated the theoretical areas of social marketing, science communication and innovation theory, developing a model of process indicators for science communication. Although this indicator research has been applied to the area of science, it is multidisciplinary in nature and the process indicators are relevant and applicable to marketing systems, management strategies, value networks, and collaborative partnerships across health, ocean energy, poverty, environmental conservation and marine ecosystems.

In the first of its kind, Patricia's doctoral research visualised how value is created in organisations through a technique called value network mapping. Value network mapping focuses on what is being co-ordinated; the system parts and their unique attributes in science communication. Patricia's doctoral research also incorporated a policy dimension, illustrating how the role of government in policy co-ordination processes is changing, which attracted the attention of the Former Chief Scientific Adviser, Professor Patrick Cunningham and the Chief Scientific Advisors Office in Ireland.

Upon completion of her PhD, Patricia joined the Marketing Discipline as a Fixed Term Lecturer and is currently a **Sea for Society Social Innovation Postdoctoral Researcher** with the Whitaker Institute. Patricia is applying her previously tested and validated indicator measurements to design, develop, analyse and report on **Sea for Society** mobilisation activities within an EU marine context.

Sea for Society is a three-year EU-funded Mobilisation and Mutual Action Plan involving 28 partner organisations across 12 European countries. The project brings together researchers, marine and land-based organisations, government and non-governmental bodies, individuals and youth in a mutual learning, consultation and joint action programme aimed at laying the foundation for a 'Blue Society'. **Sea for Society is unique and particularly innovative because it presents, for the first time, the Sea for Society conversations that helped identify the components of a Blue Society (a sustainable marine ecosystem), how they are connected to each other and where one could intervene to bring a Blue Society about.**

Funded by the European Community's Seventh Framework Programme (FP7/2007-2013), **Sea For Society** (SFS) is a Mobilization and Mutual Learning

Action Plan (MMLAP) project under the "Science in Society" programme, bringing together partners and associated partners in a dialogue process and joint actions to consider key questions, extract cross-cutting issues and propose challenge-driven solutions to ensure a sustainable management of marine ecosystem services by European citizens. This programme considers key questions concerning sustainable ocean management and examines cross-cutting issues with a view to proposing practical solutions to the challenges facing the sustainable development of our seas.

Patricia's postdoctoral research currently involves analysing and visualising the mobilisation activities of the 28 partners and associated partners involved in the **Sea for Society** programme, integrating the contributions of diverse groups across marine ecosystems that have dissimilar views, values, backgrounds, cultures and languages. This behavioural sciences approach to the integration of diverse insights, knowledge and shared values is complex in nature, as it blurs the boundaries between citizens, stakeholders, communities and societies across the EU, in order to develop experiential solutions to the challenge of living in sustainable harmony with the Sea. In Patricia's **Sea for Society** research, the measurement and visualisation of collective value and knowledge networks involves direct citizen participation, dialogue and deliberations, moving to a social learning society. Upon completion of this research, it is expected that the expertise and knowledge acquired will have the potential to shape and design change to improve communities, business decisions and policy co-ordination for sustainable marine ecosystems, that will assist in the movement towards a '**Blue Society**', a vision that is in sustainable harmony with the Sea.

MEET THE PEOPLE
BEHIND THE RESEARCHIDA FEDERICA
PUGLIESE

**Marie Curie Intra European Fellow
hosted by the Moore Institute
NUI Galway**

Dr Pugliese arrived in Galway in May 2013 after receiving a Marie Curie Intra-European Fellowship to develop a research project at the Moore Institute with Professor Daniel Carey, following the completion of her doctorate at the European University Institute in Florence. The Marie Skłodowska-Curie Actions (MSCA), funded by the European Commission, support career development and training for postdoctoral researchers. Individual Fellowships provide funding to engage in research and to enhance transferable skills to establish an independent research career.

Ida's project, 'Enlightenment craving for information: questionnaires for knowledge acquisition in the eighteenth century', explores the use of questionnaires in the eighteenth century to discuss the extension and limits of the Enlightenment circulation of knowledge. Questionnaires are now commonly used to gather quantitative and qualitative data in the domain of social, economic and political life. The distinctiveness of the questionnaire, with respect to

other communication media, resides in the attempt to guide the process of information acquisition through skilfully formulated questions. The history of this research tool can be traced as back as the early ninth century and reached new heights in the sixteenth and seventeenth century as part of colonial administration and natural history. In the eighteenth century the questionnaire became a key research technique for scholarly inquiry. Philosophes and literati extensively relied upon this tool.

The research project aims to deliver a comparative, transnational and multidisciplinary study of eighteenth-century questionnaires, exploring the extent to which they were employed systematically to collect, select, manipulate and disseminate information. Focusing on major figures like Thomas Jefferson, William Robertson, Denis Diderot and the Abbé Raynal, Ida discuss concepts of information, knowledge exchange, networks, mediation and political censorship in order to reconceptualise the Enlightenment in transnational terms. The far-reaching objective is to argue for an early modern consciousness of the value of information, which ultimately questions our own current teleological claim that we are finally living in an unprecedented age of information.

To carry out the project the researcher has conducted primary research in France, England and the United States, presenting her work to a series of international audiences at leading events. Ida has also had the opportunity to act as research assistant at Harvard University and to join the EHESS in Paris as visiting fellow.

This is Dr Pugliese's second year in Galway. She has been privileged to

collaborate with Professor Daniel Carey, an outstanding and truly inspirational mentor on both academic and personal levels. Dr Pugliese states that 'the knowledge I gained from working with him is invaluable. I also enjoyed thought-provoking talks and exchanges with professors and colleagues especially in the English and History departments'. Ida is supported through the Moore Institute for her research project, the environment is stimulating, dynamic and incredibly supportive. NUI Galway has offered an enriching and rewarding experience to Dr Pugliese. As her fellowship draws to a close this month, Ida looks forward to developing her career based on her experiences and development at NUI Galway.

PROFILES



AISLINN CONWAY

PhD Fellow at the Health Research Board – Trials Methodology Research Network (HRB-TMRN), based at the School of Nursing and Midwifery in Áras Moyola.

The focus of Aislinn's research is on trials methodology. She is studying the effectiveness of methods for the dissemination of high-quality research findings into clinical practice and in particular, systematic reviews and summary of findings tables.

Aislinn is studying under Professor Declan Devane, Director of the Health Research Board – Trials Methodology Research Network (HRB-TMRN) and Professor of Midwifery at NUI Galway and the Saolta University Health Care Group. Her co-supervisors are Professor Mike Clarke of Queen's University Belfast and Professor Shaun Trewick of the University of Aberdeen.

As a postgraduate student, Aislinn studied Information and Library Studies at University College Dublin and her Masters thesis was on information literacy instruction for healthcare staff. As a result of this work, she decided to focus on information services for healthcare staff. Later, she went on to study Research Methods in Health Sciences at the University of Warwick.

In 2010, Aislinn moved to the UK to work as a Clinical Evidence Based Information Service (CEBIS) Specialist

for the Women and Children's division at a large NHS Trust hospital. This service was established by Jacqui LeMay, Head of Knowledge Services and aims to educate staff and students on placement, and promote and facilitate the use of research evidence in practice. Here, Aislinn's work involved collaboration with staff in the neonatal, paediatric, obstetrics, gynaecological and reproductive medicine departments to co-ordinate interdisciplinary groups. Their purpose was to disseminate research evidence to clinicians to support their decision making process and thereby, improve patient care. She compiled scoping searches, evidence summaries and collaborated with clinicians to produce many policies, procedures, protocols and clinical guidelines. She assisted in the development of the Clinical Evidence Based Information System an online hosted service that links the electronic patient record to the best available evidence. The system also acts as a searchable repository of clinical topics.

At NUI Galway, Aislinn is continuing her work on the dissemination of research evidence. She will be linking with the Women and Children's Directorate at Galway University Hospital to ensure that the best available evidence on meaningful and/or patient-specific clinical topics will be disseminated to staff. Evidence Based Practice Groups (EBPGs) will be introduced as an alternative to the traditional journal

club format of continuing education for hospital staff. High quality, clinical studies will be analysed in a targeted way to seek out recommendations for patient care and clinical practice. Outcomes may include:

- changes in patient management and/or clinical practice
- confirmation that current practice is in line with the best known practice
- identifying uncertainty due to a lack of evidence

Aislinn's work at NUI Galway involves collaboration with the multi-national DECIDE (Developing and Evaluating Communication Strategies to Support Informed Decisions and Practice Based on Evidence) project. She is currently leading a Cochrane systematic review investigating the effects of summary of findings tables on user understanding of key findings from systematic reviews. It is topical because systematic reviews are currently viewed as the highest levels of evidence to support decision-making in healthcare. However, barriers such as time limitations, complexity and large volumes of research can negatively impact the ability and willingness of potential review users to engage with full versions of systematic reviews, which can often be hundreds of pages in length. Therefore, there is a need to investigate other methods of disseminating the key findings of systematic reviews to users and summary of findings tables are commonly used. The review will assess whether they are effective in increasing understanding and satisfaction, or in reducing the time take to achieve an understanding of review results.

Aislinn is very proud to be involved with the HRB-TMRN which is doing excellent work to strengthen the methodology and reporting of trials in health and social care on the island of Ireland.

Follow the HRB-TMRN on Facebook at <https://www.facebook.com/hrb.tmrn> on Twitter @hrbtmrn or visit the website www.hrb-tmrn.ie



▲ Ms Arline Broder Administrative support, Dr Sandra Galvin Coordinator, Prof. Declan Devane Director, Ms Aislinn Conway PhD Student.

Health Research Board- Trial Methodology Research Network (HRB-TMRN)

The conduct of clinical trials needs to become more efficient and effective if they are to lead to successful and effective patient care. The right trials need to be chosen, implemented and reported in the right ways. This will require improvements in how trials are prioritised, conducted, analysed, interpreted and made available to decision makers. Uncertainties remain about how best to achieve this and how to implement strategies that have already been shown to be effective (e.g., what is the best means of presenting the results of a trial to clinicians, patients and other service users). In the same way that resolution of uncertainties about optimal health care requires reliable and robust research, this same approach needs to be taken to uncertainties about trial methodology. This has been recognised clearly by the investment of the UK's Medical Research Council in trial methodology research and the HRB's decision to fund the 'HRB Trials Methodology Research Network (HRB-TMRN)' in Ireland.

The 'HRB-Trial Methodology Research Network (HRB-TMRN)' is a new, collaborative initiative between a number of Irish and international higher education institutes and methodology centres. **This exciting network is being led by Prof. Declan Devane and his team in the School of Nursing and Midwifery, and will see some of world's leading experts in trial methodology visit NUI Galway and share their expertise.** The HRB-TMRN's mission is to strengthen the methodology and reporting of trials in health and social care on the island of Ireland so that they

become more relevant, accessible and influential for patients and other service users, practitioners, policy makers and the public. This will be achieved through a programme of work relating to the methodology of trials and focussed on (i) support (ii) training and education and (iii) research and innovation.

(i) Support: The **HRB-TMRN** will help researchers across the island of Ireland, either directly by providing advice on challenging aspects of trial methodology and reporting of trials or indirectly through guidance to CRFs and other research organisations, to support their interactions with trialists. This will provide opportunities to establish new collaborations for methodology research. The **HRB-TMRN** will provide this advice and support through a *Trial Methodology and Reporting Advisory Service (TMRAS)*. The TMRAS will provide trials methodology advice to trialists who encounter methodological problems outside of the standard design of clinical trials (which we view as the work of centers such as the CRFs and CSTAR). The **HRB-TMRN** will differentiate clearly between the activity, and in particular the trial support activity, of centers and other organizations such as CSTAR and the CRFs and that of TMRAS by adopting similar principles to that of The MRC Network of Hubs' Methodology Advisory Service for Trials (MAST, www.methodologyhubs.mrc.ac.uk/methodology_advisory_service.aspx), which is a service offered by the eight Hubs in the UK that aims to provide trials

methodology advice to trialists and statisticians who encounter non-standard methodological problems.

- (ii) Training and education: The elements in our training and education program, which we will develop, consist of (i) seminars (ii) consensus conferences (iii) courses including Summer schools, modules, short courses and internet resources (iv) PhD Studentships and Summer Student Scholarships and (iv) individualized support.
- (iii) Research and innovation: In addition to the strong potential for the HRB-TMRN's plans for training, education, advisory and support roles, it will also advance Methodology Research on the island of Ireland through (i) a planned programme of novel research into issues of the design, conduct, analysis and dissemination of trials. This includes, for example, participation in the SWAT (Study Within A Trial) initiative being developed by the Northern Ireland Hub, in association with the MRC Network of Hubs and the MRC START programme, and the Network's core grant (ii) establishing a database of trial and trial methodology expertise (iii) developing a *People's Trial* and (iv) developing methods to dissemination of evidence from trials through systematic reviews.

For further information, or to express an interest in joining the **HRB-TMRN** please contact sandra.galvin@nuigalway.ie or follow us on Twitter [@hrbtmrn](https://twitter.com/hrbtmrn) and Facebook www.facebook.com/hrb.tmrn or visit the website www.hrb-tmrn.ie

Lessons from History: Ireland and the Future of Development Aid

CREATING IRELAND DISCUSSES THE PUBLIC VALUE OF FUNDING IN THE HUMANITIES AND SOCIAL SCIENCES IN IRELAND. THIS EXTRACT FROM THE PUBLICATION SHOWCASES THE ROLES OF HISTORIANS AND HOW HISTORY IMPACTS UPON POLICY FORMATION AND OUR FUTURE.



Historians emphasise process and context. Those skills are very important for contemporary policy-

makers. It is for this very reason that the British Foreign and Commonwealth Office makes systematic use of historians in policy development roles.

Uniquely among British government departments, the Office maintains a staff of full-time in-house historians to “provide a long- term, policy-relevant perspective on international issues, and contribute to the collective knowledge and understanding of the FCO and British foreign policy.”

In Ireland, expertise and historical perspective on a broad range of issues associated with Irish overseas policy are in plentiful supply across the university system.

The history of ‘development aid’ is one academic discipline still in its relative infancy, yet, as Dr Kevin O’Sullivan, a historian based at NUI Galway, stresses, it is impossible to fully understand Ireland’s contemporary international role without reference to the manner of its development.

The idea of Ireland as a ‘caring nation’ lies at the core of the image that successive Irish governments have promoted abroad.

It is an image deeply-rooted in a rhetoric of shared colonial experience with the developing world, but more crucially in a record of Catholic missionary activity and a sense of Christian duty that continues to inspire the work of many of the non-governmental organisations (NGOs) involved in development aid.

By emphasising the continuity of its commitment to ‘development’ issues – recession-era cuts in public funding notwithstanding – Ireland has been able to project itself as a good ‘global citizen’. This is important, O’Sullivan says.

“We can never be a major power so you find a niche to make your mark on the world stage.” In overseas development aid, Ireland has found an issue on which “a small state can play a leadership role.”

Drawing lessons from the past to frame future policy is not simply a matter for governments, however. It also something to which NGOs have become increasingly alert, encouraged by the opening of new channels of communications and exchange between academics and practitioners in the fields of development and humanitarian aid.

Here, O’Sullivan points to the work of a network that he co-organised, Non-State Humanitarianism: from colonialism to human rights’, which seeks to explore how humanitarian aid can draw on its history to respond to current challenges. Funded by the British Arts and Humanities Research Council (AHRC), with additional funding from an Irish Research Council New Foundations Grant in 2013, the network has brought historians and representatives of the NGO sector into a closer conversation, most notably in a series of workshops that have been held in locations as diverse as Birmingham, Potsdam and Galway.

In his role as co-convenor of these workshops, O’Sullivan has been struck by how receptive the NGOs (among them



➤ The Creating Ireland report compiled by By Mark Duncan and Paul Rouse.



“ We found the NGOs very open to the thought processes that come from being historically aware and having an historical sensibility. ”

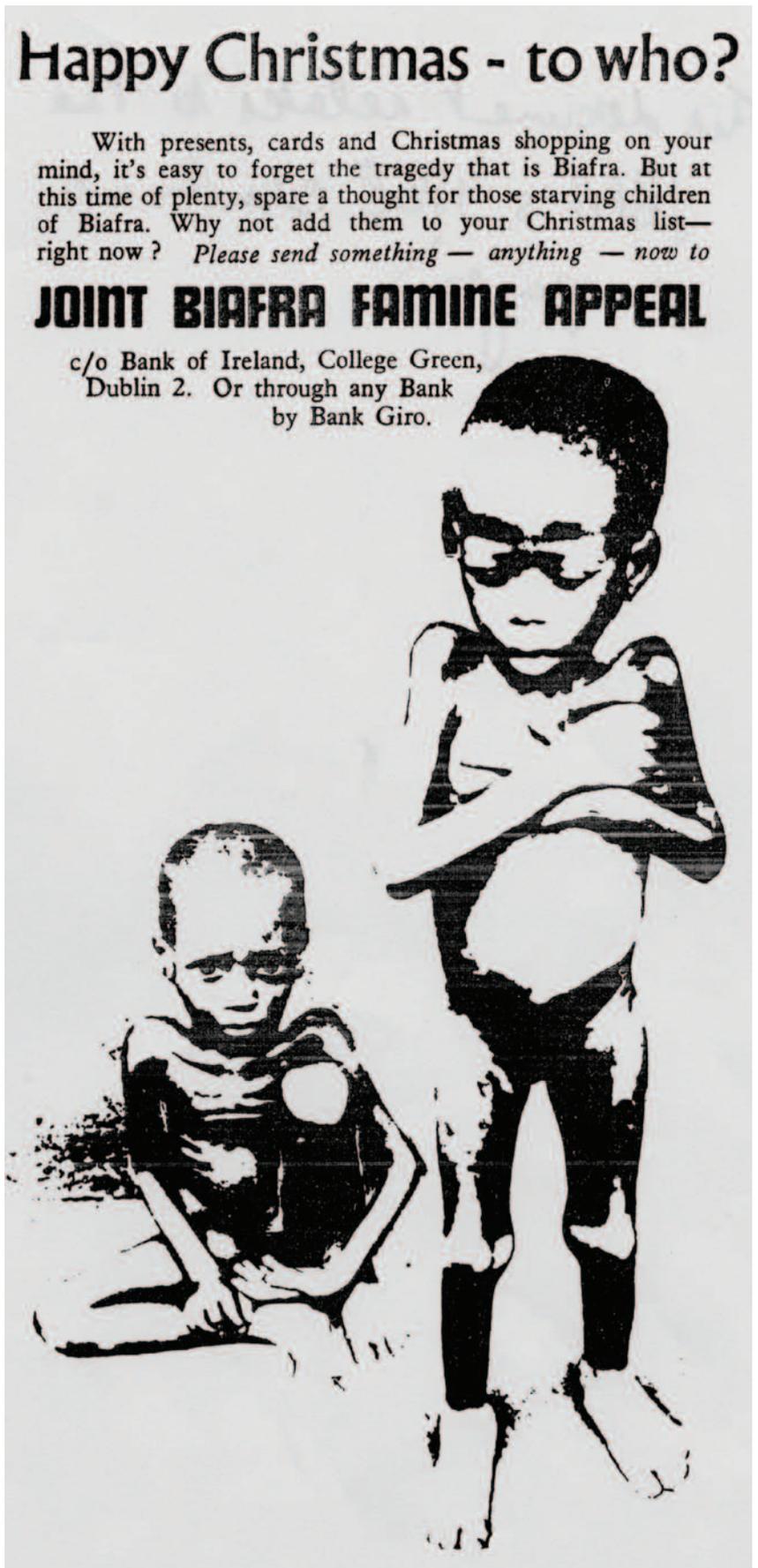
DR KEVIN O'SULLIVAN
SCHOOL OF HUMANITIES

Concern, Save the Children, Médecins sans Frontières, Christian Aid and Amnesty International) have been to the fruits of collaboration with academic historians. “We found the NGOs very open to the thought processes that come from being historically aware and having an historical sensibility. As historians, we are aware of process and context and we are conscious of patterns, and they’ve been very open to that.”

These initial steps may be small, but they are significant. Indeed, arising out of this systemised dialogue between historians, policy-makers and practitioners, new ideas have begun to flow and new plans have begun to take shape: plans are already in train to extend the collaboration in a number of exciting new directions. More strikingly, perhaps, there has even been a suggestion that history might be incorporated into the training programmes for NGO staff. The reason for this is quite straightforward, O’Sullivan suggests. “When they arrive in a country, they need to know what they are getting into and to have an understanding of the cultural and historical context.”

For humanitarian and development aid workers at least, the past is never a remote or distant place.

By DR KEVIN O SULLIVAN
School of Humanities



▲ ABOVE: Flyer for the Joint Biafra Famine Appeal, Christmas 1968. Africa Concern (now Concern) was one of the leading organisations involved in this fund-raising drive for the victims of the humanitarian crisis precipitated by the Nigerian Civil War.

NUI GALWAY BOWEL CANCER RESEARCH, FUNDED BY THE IRISH CANCER SOCIETY WINS PRESTIGIOUS EUROPEAN ASSOCIATION FOR CANCER RESEARCH AWARD

Breakthrough Cancer Research wins European Association for Cancer Research Award



Irish researchers have found that switching off a specific protein in bowel cancer cells can stimulate an anti-tumour immune response which can reduce the spread of cancer to other parts of the body. The breakthrough research by Dr Aideen Ryan of NUI Galway, which was funded by the Irish Cancer Society, has been awarded the prestigious European Association for Cancer Research (EACR) Young Investigator Award. Dr Ryan works in the area of Biosciences as an Irish Cancer Society Research Fellow with the Immunology Group in REMEDI.

Bowel cancer is one of the most common cancers affecting both men and women. With approximately 2,400 new cases and almost 1,000 people dying from this cancer each year, bowel cancer represents a significant health concern in Ireland. To date, therapeutic developments to tackle the problem of bowel cancer spreading to other parts of the body have had very little success and new methods are urgently needed to improve survival for patients.

This award winning research found that the activity of a key protein known as NF-kappaB, with the help of a type of immune cell, called tumour-associated macrophages (TAMs), promotes the spread of cancer cells from the bowel to the abdominal cavity. TAMs are present within or close to tumour tissue and can act in tumour-promoting or a tumour-killing manner, depending on their surrounding environment. Dr. Ryan and colleagues in NUI Galway found that TAMs can be switched from being tumour-promoting to being tumour-killing by turning off the NF-kappaB protein in bowel cancer cells, thereby causing a significant reduction in bowel cancer spread to the abdominal cavity.

Dr Ryan said "I am delighted to have been presented the EACR Young Investigator Award for this research. Our findings have, for the first time, uncovered the effect of targeting the NF-kappaB protein in bowel cancer cells. We are continuing this important research in order to develop a new treatment approach for bowel cancer which could potentially result in better treatments for patients with this disease."

This research adds to recent developments in bowel cancer research conducted with the support of the Irish Cancer



↑ ABOVE: Dr Aideen Ryan of NUI Galway.

Society whereby Irish scientists are now developing a simple and inexpensive blood test which can be used as an early detection tool for bowel cancer. Irish Cancer Society funding, provided through the Society's Research Fellowship Programme to Dr Gregor Kijanka, Dublin City University, was instrumental in the initial development and validation of this new test.

Commenting on the research, Dr Robert O'Connor, Head of Research, Irish Cancer Society said, "We are delighted to see that the Society's investment in bowel cancer research is generating exciting new findings which will make a difference to patients. We congratulate Dr Aideen Ryan on receiving the EACR Young Investigator Award which is testament to the significant contribution she has made to the area of bowel cancer with her ongoing research. This research, which was made possible by Irish Cancer Society research funding, opens new avenues for the development of novel treatment approaches which will hopefully benefit bowel cancer patients in Ireland."

Dr Ryan's research was published in *Oncogene*, one of the world's leading cancer journals, and Dr Ryan was awarded the European Association for Cancer Research (EACR) Young Investigator Award at the annual Irish Association for Cancer Research (IACR) conference. This award is presented to outstanding young researchers in the field of cancer research for a recent, significant contribution to the field.

By RUTH HYNES
Press and Information Office

DR EILIONÓIR FLYNN OF THE CENTRE FOR DISABILITY LAW AND POLICY, MARTIN O' DONNELL, PROFESSOR OF TRANSLATIONAL MEDICINE AND DR MARTIN O' HALLORAN, COLLEGE OF ENGINEERING AND INFORMATICS AT NUI GALWAY HAVE BEEN AWARDED EUROPEAN RESEARCH COUNCIL (ERC) STARTER GRANTS.

Major ERC Funding Success for NUI Galway



Professor O'Donnell's award will support his so-called "blue sky research" project entitled 'Clarifying Optimal Sodium Intake Project' (COSIP). The leading cause of death globally is cardiovascular disease, and elevated blood pressure is a major modifiable cause. High

sodium (salt) intake causes an increase in blood pressure, and increased risk of cardiovascular disease. Based on studies looking at reducing sodium intake and blood pressure, it is recommended that sodium intake is reduced to low levels (<2.0g/day) in the entire population, which is about half of current intake. However, says O'Donnell "sodium is an essential nutrient, and some recent research by our group, and others, has raised questions about whether low sodium intake is optimal for health in all people. My research will focus on understanding the relationship between different levels of sodium intake and physiological markers of cardiovascular health. We will explore whether our genetics play an important role in modifying the effects of different levels of sodium intake on blood pressure and risk of stroke and heart disease. Does one size fit all, or do people have different sodium intake requirements? In addition to sodium intake, we also look at potassium intake and effect of overall dietary patterns on cardiovascular health."

Dr Flynn is the youngest of the ERC Starter grantees this year. Her award of almost €1m in funding for the ground-breaking VOICES project will run for three and a half years.

The VOICES project aims to make visible the experiences of people with disabilities who have been denied legal capacity. It will involve a series of workshops where people with this lived experience will be paired with social and legal scholars to develop their narratives, and construct critical responses to these narratives, for inclusion in an edited collection at the end of the project. Dr Flynn said "The VOICES project will take a radical approach to develop new law reform ideas based on the concept of "universal legal capacity", a basic human freedom to make one's own decisions and have them respected by law. People with disabilities will be supported in this project by legal and social science scholars to develop personal narratives about their experiences in exercising, or being denied, legal capacity. This is important because many people with disabilities, especially people with intellectual, psycho-social and other cognitive disabilities, have been denied this fundamental right.



▲ ABOVE: (L-R) Dr Eilionóir Flynn, Professor Martin O'Donnell and Dr Martin O'Halloran.

Dr O'Halloran's research explores the dielectric properties of human tissue as a fundamental basis for the design, development and optimisation of electromagnetic imaging and therapeutic devices. Crucially, these same properties are also used to determine the safety of all electromagnetic based devices, including your mobile phone. Understandably, this topic is becoming increasingly important as personal mobile devices become more and more pervasive, particularly in the case of children and young adults.

The dielectric properties of tissue has been examined for over 100 years, and through a large number of small-scale experimental studies, a database of dielectric properties for human tissue has been established and accepted.

Worryingly, however, is the fact that in the last 10 years, a series of more clinically-rigorous single-tissue studies have re-examined these properties and have produced results in direct conflict with historical results. This leaves researchers in a very difficult situation, where the very foundations of the research area are in question.

This research project at NUI Galway will seek to completely re-examine the dielectric properties of human tissue, through carefully designed clinical studies. It will also provide a platform for the development of new low-cost electromagnetic-based medical devices at NUI Galway, very much aligned to the economic and societal goals of H2020.

By NATALIE WALSH
Research Office

THE WORLD-RENOWNED HUMAN RIGHTS LAWYER AND SCHOLAR, PROFESSOR KEVIN BOYLE, SERVED AS A SPECIAL ADVISOR TO MARY ROBINSON FROM SEPTEMBER 2001, WHEN SHE WAS UN HIGH COMMISSIONER FOR HUMAN RIGHTS. HIS PERSONAL ARCHIVE, COMPRISING OF OVER ONE HUNDRED BOXES OF MANUSCRIPTS AND PRINTED BOOKS, IS A RECORD OF THE VARIED AND RICH CONTRIBUTION MADE BY THE ACTIVIST AND SCHOLAR TO INTERNATIONAL HUMAN RIGHTS.



Professor Kevin Boyle

**THE HUMAN RIGHTS SCHOLAR-ACTIVIST
OR ACTIVIST-SCHOLAR?**



Also speaking at the international symposium, 'The Human Rights Scholar-Activist or Activist-Scholar?' hosted by NUI Galway's School of Law and the Irish Centre for Human Rights, was Professor Sir Nigel Rodley, Chair of

the United Nations Human Rights Committee. In his keynote address he said of Kevin Boyle: "His involvement in resisting discrimination on grounds of religion during the early part of the troubles must have been the defining period of his life... He was scholar and activist and advocate; the dimensions were intricately connected."

The archive, kindly donated by the Boyle family since Kevin's untimely passing in 2010, has now been catalogued by the University's James Hardiman Library, and represents a major

resource for the study and teaching of human rights. It will be formally launched later today by the Attorney General, Máire Whelan, S.C. The archive includes:

- Letters between Boyle and various others involved in the Northern Ireland civil rights movement. It offers a new and engaging insight into emotions, tensions and experiences in Northern Ireland from the late 1960s and onwards through the 1970s.
- Key research and legal arguments on a wealth of areas from Kurdish rights, to Egyptian constitutional and legal reform, to conditions in India, China, Japan, South Africa to the UK, Ireland and Northern Ireland, offering insights into a life lived in defence of others for over five decades.



⤴ ABOVE: Professor Sir Nigel Rodley, Chair of the United Nations Human Rights Committee speaking at NUI Galway.

- Paperwork from major cases, such as 'Jersild Vs. Denmark, where a documentary film-maker was accused of inciting hatred owing to a film work he had made focusing on a right-wing group known as 'The Green Jackets', in Denmark.

"The Kevin Boyle archive bears witness to a life lived greatly in the pursuit of justice by a charismatic man whose indefatigable optimism influenced so many others to continue his good work throughout the world", said Professor Donncha O'Connell, Head of School of Law, NUI Galway.

In the late 1970s Kevin Boyle joined NUI Galway where he co-founded the Irish Centre for Human Rights with Denny Driscoll in 1980. Professor Michael O'Flaherty is now the Director of the Irish Centre for Human Rights: "I was one of thousands of those



⤵ LEFT: NUI Galway President, Dr Jim Browne, with Joan Boyle, wife of the late Professor Kevin Boyle, whose archive was unveiled at the University's Hardiman Library.

who were first introduced to human rights by Kevin Boyle. He had a transformative impact on our lives. As his successors in university centres such as the Irish Centre for Human Rights we seek to respect his legacy and pass on his passion for justice to new generations of students."

RESEARCH IN FOCUS



⤴ ABOVE: Back row: US Senator Tom Harkin with Professor Ger Quinn, Director of the Centre for Disability Law and Policy. Front row: Marca Bristo, former chair of the US National Council on Disability and outgoing chair of the US International Council on Disability; Her Excellency Anne Anderson, Ambassador of Ireland to the US.

NUI Galway's Centre for Disability Law and Policy Director honoured in US with Senator Harkin

Professor Gerard Quinn of NUI Galway was honoured alongside Senator Tom Harkin by the United States International Council on Disabilities in recognition of his work in the field of international and comparative disability law and policy. The ceremony took place in Washington on the eve of the international day of people with disabilities, December 2nd 2014.

For more information visit:
<http://www.usicd.org/template/index.cfm>

The Human Rights Framework as a Mechanism to Deliver Fair Healthcare

The issue of delivering healthcare fairly, using a human rights framework, was discussed at NUI Galway today (6 February). The public event was part of the President of Ireland's Ethics Initiative and President Michael D. Higgins opened the event.

The event was organised by NUI Galway's Irish Centre for Human Rights and its College of Medicine, Nursing and Health Sciences.



⤴ ABOVE: Pictured at the event are. Dr Diarmuid O'Donovan, Senior Lecturer in Social and Preventive Medicine at NUI Galway, Sabina Higgins, President Higgins, and Professor Michael O'Flaherty is Director of the Irish Centre of Human Rights.

A CLOSER LOOK AT RESEARCH ACTIVITY
ON AND OFF CAMPUS



➤ ABOVE: PhD student Dermot Hale was awarded the BEAI Silver Medal for Best Scientific Poster for his work on Equipment Qualification in Healthcare at the recent Biomedical & Clinical Engineering Association of Ireland Annual Scientific Conference. Dermot is pictured receiving the award with his research supervisor Enda Fallon, Senior Lecturer in Mechanical & Biomedical Engineering.



➤ ABOVE: L-R; Dr Mary Baker, MBE, European Brain Council, Mrs. Sheila Roy, ProSavin®: One patient's experience and Dr Eilís Dowd, NUI, Galway, NECTAR President.

Galway Network of European Central Nervous System Transplantation & Restoration (NECTAR) Conference Hailed a Success

A major conference on neurodegenerative diseases in Galway in December has been hailed a huge success by organisers. This was the first time the Annual Meeting of the Network of European Central Nervous System Transplantation & Restoration (NECTAR) was held in Ireland. NECTAR saw researchers gather to discuss the latest developments in cell and gene therapies for neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease and Huntington's disease.

RESEARCH BYTES



⤴ ABOVE: Representatives from funded NUI Galway projects under 'Engaging Civic Society' strand of the Irish Research Council New Foundations Awards.



⤴ ABOVE: Researchers granted €400,000 for over 40 community projects through the Irish Research Council's recent New Foundations Awards.

COMMUNITY ENGAGED RESEARCH IN ACTION: NUI Galway IRC 'New Foundations' Projects: Engaging Civic Society Strand

RESEARCH PROJECTS WHICH GAINED FUNDING FROM THE IRISH RESEARCH COUNCIL 'NEW FOUNDATIONS' SCHEME 2014, UNDER THE ENGAGING CIVIC SOCIETY STRAND, LED BY DRs. JOSEPHINE BOLAND, SCHOOL OF MEDICINE AND PADRAIG MAC NEELA SCHOOL OF PSYCHOLOGY WILL FOCUS ON COMMUNITY ENGAGED RESEARCH IN ACTION, NUI GALWAY.

Dr Josephine Boland's research will explore the topic of engaging young adults in resettlement service planning. Young homeless adults (aged 18-25) have particular needs which are not well served by existing services. This project develops a participatory approach to planning a new resettlement service which empowers young adults to exit homelessness and transition to independent living. We provide participatory research training for clients and relevant stakeholders, to enable them to engage actively as co-researchers in a new model of service development based on a holistic and multidisciplinary approach. The emerging model will be disseminated to other service providers and will contribute to advancing institutional, national and EU research agendas in support of social change.

Dr Pádraig MacNeela's project titled 'Sexy Consent': Devising Workshops to Empower Young Adults to Negotiate Consent to Sexual Activity aims to address that gap through empowerment and peer-to-peer learning. Through a collaborative research project with Rape Crisis Network Ireland, materials and procedures for "Sexy Consent" workshops with university students will be designed and piloted. Grounded in group discussion of realistic (but hypothetical) scenarios, workshops will empower students to critically explore understandings, attitudes, and practises related to consent to sexual activity. Dissemination activities will support implementation of workshops among third-level institutions and demonstrate the relevance of this approach to other at-risk youth populations.

A ROUND UP OF RESEARCH
NEWS AT NUI GALWAY

Conference on the French Writer Yves Navarre and Donation to the Library

An international conference on the French author Yves Navarre (1940-1994) took place in NUIG on 25th and 26th September 2014. "Yves Navarre: Une vie à écrire" was the first event ever organized on the writer since his death twenty years ago. It brought together people from different countries and professional backgrounds. The literary executor, publishers, writers, performers and academics got together to exchange views on Navarre's work. Jean Perrenoud, literary executor, made a generous donation to the James

Hardiman Library of a significant manuscript of 28 songs by Yves Navarre titled "Les âmes résolues", unique in the writer's body of work. Jean Perrenoud also announced he is considering donating further material from his Yves Navarre collection to the University at a future date. The event, organized by Dr Sylvie Lannegrand, was supported by the Ambassade de France en Irlande, the ACSI (Association irlandaise d'études canadiennes) and National University of Galway, Moore Institute (Millennium Fund).

NUI Galway Professor Elected Science Secretary of the Royal Irish Academy

Professor Peter McHugh was elected Science Secretary of the Royal Irish Academy at the Stated General Meeting of the RIA recently.

The Royal Irish Academy is Ireland's leading body of experts in the sciences and humanities. Founded in 1785 The Royal Irish Academy/Acadamh Ríoga na hÉireann is a publicly funded institution established for the promotion of Irish academic research.

Professor Peter McHugh holds a BE in Mechanical Engineering from UCG (1987), and an MSc (1990) and PhD (1992) in Mechanics of Solids from Brown University, Providence, USA. He joined NUI Galway in 1991, where he is currently Professor of Biomedical Engineering and Head of Discipline of Biomedical Engineering, within the College of Engineering and Informatics. His research is focused on fundamental developments and applications of computational and experimental methods in biomechanics,



tissue mechanics and medical implants and devices. He has taken a leadership role in the development of biomedical engineering in Ireland through high quality and prolific research and publication output, and undergraduate and graduate education programme generation.

He has received numerous awards, including membership of the Royal Irish Academy (2011), the Silver Medal of the Royal Academy of Medicine in Ireland (Section of Bioengineering) in 2011, the Presidential Nominee Fellowship of Engineers Ireland in (2009), and the Alexander von Humboldt Fellowship (1995).

First Hardiman Research Scholarship Graduates

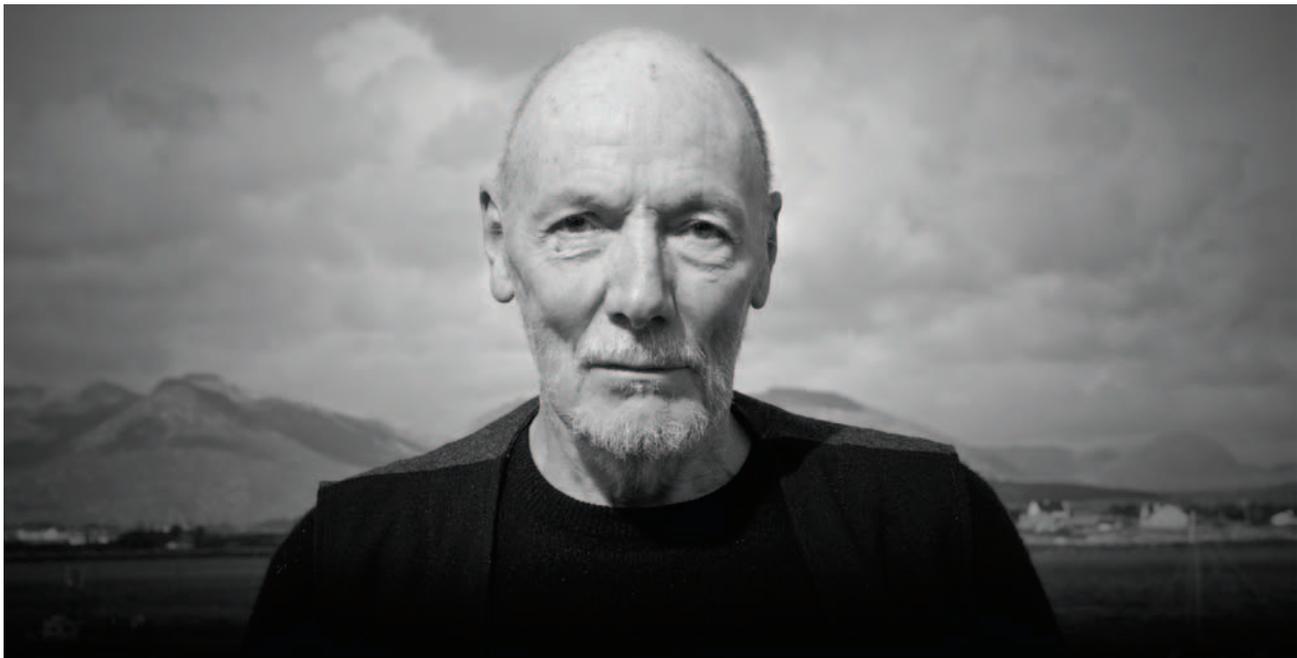
Claire Glynn is the first Hardiman scholarship-funded PhD student to graduate. She was one of the universities first cohort of thirty-two PhD students to receive a Hardiman Research Scholarship in September 2011. Claire was awarded a PhD in Surgery for research supervised by Dr Róisín Dwyer and Prof. Michael Kerin on understanding microRNA secretion from breast cancer cells. She is now an Assistant Professor in the Henry C. Lee College of Criminal Justice and Forensic Science, University of New Haven, Connecticut, USA.

The objective of the Hardiman Scholarship scheme is to attract the best national and international PhD students to NUI Galway focussed on the University's priority research areas. With the Galway University Foundation support it has received additional external funding from Cancer Care West and for the Dr Tony Ryan Research Scholarships. One of the successes of this scheme has been the identification of outstanding PhD students who have secured Irish Research Council-funded PhD scholarships. Applications are currently being assessed for the 2015 scholarships.

RESEARCH BYTES



Interpreting Landscape: Tim Robinson and the West of Ireland



⤴ Cartographer and author Tim Robinson photographed at Roundstone, Co Galway Photograph: Nicolas Fève. Image: ©2014, Ashley Duffalo.

An RTÉ 1 radio documentary and interview with Tim Robinson was recently broadcast on the Arts Tonight Programme with Vincent Woods. The programme featured Professor Jane Conroy and Dr Nessa Cronin who discussed the impact and legacy of Robinson's maps, writings, and artwork, in addition to staff based at the James Hardiman Library, Kieran Hoare, Barry Houlihan and Niall McSweeney who are currently involved in archiving over 100,000 items from the Robinson Archive at NUI Galway. The podcast is available to download here: <http://www.rte.ie/radio1/arts-tonight/> A second, more extended interview with Tim will be broadcast in Spring 2015.

Pioneering cartographer and writer, Tim Robinson whose archive is based at NUI Galway has been honoured by a series of events at NUI Galway and the Royal Irish Academy this year to mark the publication of *Connemara and Elsewhere*. On Tuesday,

30 September NUI Galway honoured the Robinsons' unique contribution to Irish literature and landscape studies with a new book, *Connemara and Elsewhere* as well as with an associated exhibition and international symposium entitled, *Interpreting Landscape: Tim Robinson and the West of Ireland*.

The publication *Connemara and Elsewhere*, a photographic essay and meditation on Robinson's work by French photographer Nicolas Fève with an introduction by American scholar and writer John Elder also features three new previously unpublished essays by Tim Robinson. Edited by Jane Conroy and published by the Royal Irish Academy in association with Galway University Foundation, was launched by Vincent Woods following the day-long international symposium organized by the Moore Institute.

The accompanying exhibition, *Interpreting Landscape: Tim Robinson and the West of Ireland*, based on the Robinson archive with photographs and extracts from *Connemara and Elsewhere*, ran from the 30 September 2014 to 31 January 2015 in the Hardiman Research Building, NUI Galway. A screening of 'Unfolding the landscape' a filmed interview with Vincent Woods and Tim Robinson, commissioned by NUI Galway also featured during the symposium.

Connemara and Elsewhere
(Royal Irish Academy, 2014)

Available from:

[www.ria.ie/Publications/Books/
Browsing-Connemara](http://www.ria.ie/Publications/Books/Browsing-Connemara)

Folding Landscapes,
Roundstone, Co. Galway

www.foldinglandscapes.com

NUI Galway Spin Out Company Qpercom opens OSCEs to Multiple Examiners

Qpercom has recently launched a “Multiple Examiners” feature to their OSCE Management Information System (OMIS), which was developed at the School of Medicine in the National University of Ireland, Galway. This enables two or more examiners to jointly mark OSCE stations, and scores from all station examiners are combined as an overall score. The benefit of this form of scoring is that the expertise of two examiners can be recorded and students may receive more accurate results. The evaluation of two or more examiners can also be analysed to gain even greater insights into examiner behaviour. This development is supported by two other features: examiner weighting and examiner assigning.

Examiner Weighting

Each examiner can be appointed a per-station weighting to acknowledge seniority, experience and/or other relevant factors to refine their influence over the weighted average final score – there is also a zero weighting option for observers, simulated patients or guests. This feature could also be used to jointly mark short or long case discussions, admission scenarios, internships, written assignments or MSc/PhD publications.

Examiner Assigning

This allows specific examiners to be assigned to particular stations during an OSCE for the purpose of streamlining the coordination of exams. When this feature



is enabled examiners will only have access to that station to which they are assigned.

These new additions to Qpercom’s Online Marking Tool will be crucial for conducting research related to examiner behaviour and the company anticipate this will lead to collaborative studies across their nineteen academic partners. Implementing these features would offer interesting opportunities for research in medical educational decision making.

Regional Innovation Through Graduate Education Seminar at NUI Galway

The College of Science hosted a Regional Innovation through Graduate Education seminar in December 2014. The event brought together entrepreneurs, SMEs and large industry, state agencies, academics and PhD students. The event gathered over a 100 attendees and debated how postgraduate education can be fostered to achieve enhanced industrial innovation and postgraduate employability in the West of Ireland.

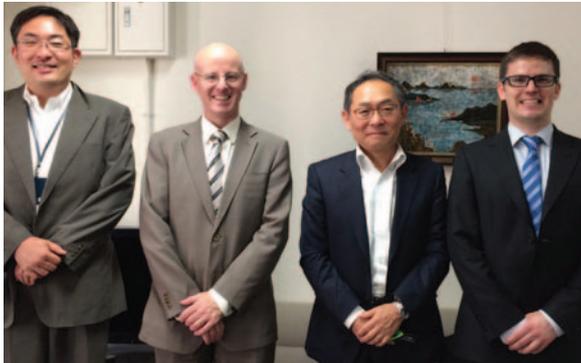
The discussion clearly conveyed NUI Galway’s commitment to maintain a strong regional focus in the approach to the development of a smart specialisation strategy for the West of Ireland; and a clear interest to multiply the number of active connections with

the industry base in the region. Industry-university partnerships in post-graduate education were identified as a vector for a regional transformation, towards societal development and enhanced industrial competitiveness.

Dr Ger O’Connor, Vice Dean for graduate studies says: “The initiative provides an opportunity for NUI Galway to be an integral player in the development of a bottom up regional specialisation strategy. The College of Science in particular has the capability to align the various strengths of our entrepreneurial landscape on one side with the knowledge and research capabilities of our Academics.” He adds: “The new and existing

MSc programmes in Key Enabling Technologies (KETs) and Chemical Skills, as well as other established courses, provide the framework for new collaborative initiatives with industry in postgraduate education.” He added that “The event is the first of a series of initiatives which the College of Science in NUI Galway will deploy to foster industrial innovation through its advanced research and technological capacity and postgraduate education offer” says Ilaria Nardello, Industry Research Specialist. “A series of focused follow-up discussions with leading industries in the region will start immediately in the new year.”

RESEARCH BYTES



⤴ ABOVE: Introducing ISCA Japan to RIKEN, Japan's largest research institute: L to R: Mr Soh Osuka, Manager, Global Relations and Research Coordination Office; Mr Diarmuid O'Leary, Deputy Head of Mission, Embassy of Ireland in Japan; Dr Kenji Oeda, Executive Director; Mr Joe Moore, ISCA Japan Coordinator.



⤴ ABOVE: Insight-Fujitsu Collaboration: Insight @ NUIG and Fujitsu Laboratories have been part of a joint research project since 2012. Mr Shigeru Sasaki presented at the October 3rd ICT and Big Data conference in Tokyo. L to R: Prof Stefan Decker, Director, Insight; Mr Tatsuo Tomita, Chairman, Fujitsu Laboratories, Mr Shigeru Sasaki, Corporate Senior Vice President, Fujitsu Laboratories; Dr Vit Novacek, Postdoctoral Researcher, Insight @ NUIG.

国際戦略協力賞 **The International Strategic Cooperation Award**

Cross-Border Collaboration

THE INTERNATIONAL STRATEGIC COOPERATION AWARD (ISCA) IS SFI'S INTERNATIONAL RELATIONS INITIATIVE, AIMING TO DEVELOP NEW AND EXISTING COLLABORATIVE R&D LINKS WITH IRELAND'S INTERNATIONAL PARTNERS.

Up until 2013, there were three ISCA partner countries: Brazil, India and China. NUI Galway is now leading the programme of the newest partner country, Japan.

History

In June 2013, Prime Minister of Japan Mr Shinzo Abe made the first visit of a serving Japanese Prime Minister to Ireland. Following Mr Abe's invitation for a return visit, Taoiseach Enda Kenny travelled to Japan in December 2013. The reciprocal state visits acted as a catalyst for a determined approach to improve Ireland-Japan relations, and the two leaders issued a Joint Declaration: "The Ireland-Japan Partnership for Innovation and Growth". One area of this new partnership is a strengthened R&D relationship, and while in Tokyo Mr Kenny announced Japan as a new partner country for the ISCA Programme, allocating €1.24 million in funding over two years through Science Foundation Ireland.

ISCA Japan brings together a consortium of eleven Irish research institutes: DCU, DIT, MU, NIBRT, RCSI, TCD, UCC, UL, WIT, and NUIG as the lead institute. There are six scientific areas within the programme's remit:

- Advanced manufacturing and materials
- Environmental and climate sciences and technologies
- ICT and big data analytics
- Imaging and optics
- Future healthcare including connected health
- Medical devices and regenerative medicine

The programme will be implemented through activities of three broad formats: academic workshops based in Ireland, industry-focused seminars in Japan, and individual bilateral research exchange visits.

ISCA Japan's project leader is Ciaran Morrison, a Professor in Biochemistry

and an SFI Investigator at the Centre for Chromosome Biology, School of Natural Sciences. Ciaran was the recipient of a prestigious Japan Society for the Promotion of Science Fellowship Award, and spent two years conducting postdoctoral research at Kyoto University.

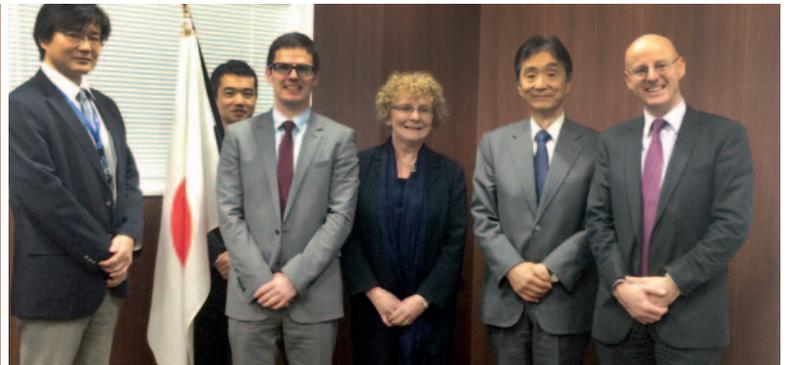
Commenting on the programme, Ciaran said: "The ISCA Japan Programme is a great opportunity for researchers from Ireland and Japan to come closer together and cultivate new and exciting collaborations. Since starting in March, there have been a number of exciting activities involving researchers from both NUIG and other Irish institutions, and I am looking forward to seeing the programme progress over the next year and a half"

Since the programme started officially in March 2013, there have been a number of highlights:

- In October, eleven Ireland-based researchers travelled to Tokyo for a conference organised through ISCA



➤ Professor Nick Campbell, Centre for Global Intelligent Content, TCD; and Dr Chiori Hori, Director, National Institute of Information and Communications Technology. Prof Campbell and Dr Hori, long-term collaborators, both presented at the October 3rd ICT and Big Data conference in Tokyo.



➤ Pictured are Ambassador Anne Barrington and President of JSPS Dr Yuichiro Anzai, along with ISCA Japan Coordinator Joe Moore and Deputy Head of Mission Diarmuid O'Leary and representatives of JSPS

Japan. "EU-JAPAN R&D COOPERATION, HORIZON 2020 AND THE IRISH ICT RESEARCH OPPORTUNITY" was attended by over 100 Japanese academics and industry experts, with researchers from Ireland presenting on Irish capabilities in big data and cloud computing. Prof Stefan Decker and Dr Vit Novacek from Insight @ NUIG both presented at the event.

- Programme Coordinator Joe Moore also visited Japan in October, introducing the programme to a number of Japan's science funding agencies, government ministries and research institutes.
- On November 7 - 8, UCD hosted an academic workshop entitled "Extreme Ultraviolet Source Development for Lithography, Surface Morphology and Water Window Imaging". Eight Japanese researchers attended the workshop from institutes including Utsunomiya University, Osaka University, and the Japan Atomic Energy Agency.
- To date, a total of twenty-seven research exchange trips have taken place, both from and to Japan, involving researchers from all consortium member institutes.

Funding Opportunities

ISCA Japan - There is a limited amount of funding to facilitate bilateral research exchange trips for researchers within NUIG.

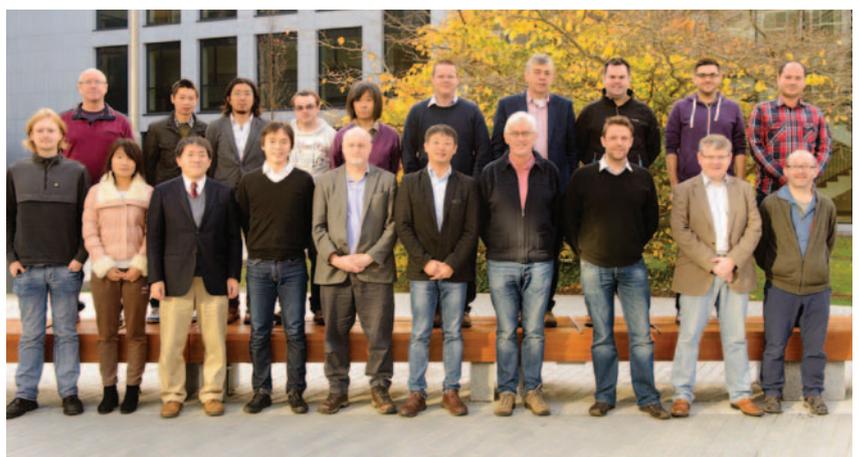
JSPS - The Japan Society for the Promotion of Science is one of Japan's science funding agencies. It has a generous programme of research fellowships, which allow researchers of all levels to visit Japan for periods of one month up to two years, to undertake joint research with a host institution.

If you would like more information on the above funding opportunities, please contact joseph.moore@nuigalway.ie, or visit the following websites:

www.irelandjapanresearch.com
www.jsps.org
www.jsps.go.jp

By JOE MOORE
 Programme Coordinator

Joe graduated from Trinity College Dublin with a degree in maths. He then participated in the Japan Exchange and Teaching Programme as a language teacher for three years, living and working in Niigata, Japan. The JET Programme is one of the largest international language and cultural exchange programmes in the world. While in Japan, Joe became proficient in Japanese. After returning to Ireland, Joe took up the post of JET Programme Coordinator for one year, in the Embassy of Japan in Ireland. Since August he has been the ISCA Japan Coordinator, based in the Research and Innovation Office of NUIG. Joe's favourite Japanese word is 元気 (genki) which means happy, healthy and positive.



➤ ABOVE: Researchers from four Irish institutes and eight Japanese institutes attended the "Extreme UV Source Development" workshop in UCD.

RESEARCH BYTES



Professor Tony Dundon Conferred with Academy of Social Science Fellowship

NUI Galway Professor of Human Resource Management and Employment Relations, Professor Tony Dundon, has been conferred with the award of Fellow by the Academy of Social Sciences. Professor Dundon is one of 34 leading social scientists to receive the award. Professor Dundon is recognised as a key figure in the development of employment relations studies, in particular on employee voice, worker rights and regulatory systems of industrial relations.

The Academy of Social Sciences is the UK's National Academy of Academics, Learned Societies and Practitioners in the Social Sciences. It has around 1,000 individual Fellows, who are distinguished

scholars and practitioners from academia and the public and private sectors. They are awarded Fellowship status after peer group review of the standing and impact of their work and evaluation of their contribution to wider social science.

The recipients of this award have a wide range of expertise in the social sciences, including town planning, education, geography, social work, law, sociology, economics and psychology. These Fellows have made a substantial contribution to wider social science in a variety of contexts, including in higher education, government, funding councils, charitable foundations and think tanks.



School of Mathematics, Statistics, and Applied Mathematics Activities

In late 2014, the School of Mathematics, Statistics and Applied Mathematics hosted a number of conferences to promote and support research activity. The de Brún workshop series began in 2008, the seventh workshop was devoted to homological perturbation theory, applications and related topics. Speakers and workshop slides and information is available at <http://hamilton.nuigalway.ie/HPT/>

The second conference hosted by the School is the Joint Symposium 'Irish Mechanics Society Irish Society for Scientific Engineering & Computation (ISSEC)'. The aim of ISSEC is to bring together researchers in mechanics and engineering from various fields. We expect a board range of topics in mathematical modeling, computational methods and experimental techniques to mention a



few. The research efforts may concern material properties and mechanical response of any type of engineered and natural material, and they may be relevant to different scales in space and in time. The symposium was comprised of several focused sessions on a range of topics in solid mechanics, fluid mechanics, and numerical methods. Topics of interest will include, but are not limited to, elasticity, plasticity, fracture mechanics, composite materials, finite element methods, biomechanics, computational fluid dynamics, fluid-solid interactions, turbulence.

Further information is available at <http://maths.nuigalway.ie/ISSEC/>

The final conference was organised by the newly formed SIAM student chapter in Galway and was the first of its kind in the Republic of Ireland. The aim of the conference was to bring together research students from different universities, giving them the chance to broaden their horizons and see what other students in their research area are working on.

Visit: <http://www.maths.nuigalway.ie/SIAM-Galway/PG-Conf-14/> for further information.

Diversifying the Teaching Profession, an Irish Research Council Project

On Friday 24th October, a research seminar on the Diversity in Initial Teacher Education (DITE) in Ireland research project was held in the School of Education at NUI Galway. DITE is a national research project funded by the Irish Research Council, and led by Dr Elaine Keane and Dr Manuela Heinz, Lecturers in the School of Education. The DITE project is situated in the Moore Institute.

Officially opened by Professor Chris Curtin, seminar attendees were welcomed by Dr Mary Fleming. The keynote speaker was Professor Ninetta Santoro, from Strathclyde University in Glasgow, who has previously been

a Professor of Education and Head of the School of Teacher Education at Charles Sturt University, Australia. In her talk, Professor Santoro examined the rationale for diversifying the teaching profession and emphasised the necessity of preparing all teachers to work successfully with all pupils, through the use of culturally-responsive teaching methodologies. The DITE team presented on the background to and rationale for the project, as well as their initial findings. The seminar attracted great interest and was very well attended, with representatives from the Economic and Social Research Institute (ESRI), the Association of Secondary Teachers of Ireland (ASTI) and the Irish

National Teachers Organisation (INTO), the Central Applications Centre (CAO), the Equality Authority, Pavee Point Travellers Centre, academic staff from a range of initial teacher education providers in Ireland, and teachers, researchers and other colleagues. The seminar was very well publicised, with features appearing in the Irish Times and the Herald.

For more information, please contact: Dr Elaine Keane, Lecturer & Director Master of Education, School of Education, College of Arts, Social Sciences & Celtic Studies, National University of Ireland, Galway. Email: Elaine.keane@nuigalway.ie or Tel.: +35391493032

NUI Galway signs Co-operation Agreement with Addis Ababa Science and Technology University

In April 2015 NUI Galway signed a co-operation agreement with Addis Ababa Science and Technology University (AASTU), in which the Irish university will support its Ethiopian counterpart in establishing itself as an international hub of science, innovation, and education in East Africa.

AASTU was founded by the Ethiopian government in 2011 with a mission to become a leading force in higher education in Ethiopia, a country with one of the fastest growing economies in the world. It is part of Ethiopia's five-year Growth and Transformation Plan, aimed at developing Ethiopia from its reliance on subsistence agriculture to a capacity for market-led production and innovation.

In 2013, through its Embassy in Dublin, the Ethiopian government approached NUI Galway to invite it to serve as



a development partner to the new university. NUI Galway will assist AASTU in developing its institutional practices and programmes, and will share its expertise in areas such as academic administration, quality assurance, programme development, community outreach, industry engagement, and librarianship. There is also provision for staff and student exchanges.

NUI Galway's Dean of International Affairs, Professor Brian Hughes said: "We are very proud to sign this agreement with AASTU. NUI Galway has a long history,

and we have benefited greatly from the assistance of our colleagues around the world. We are privileged now to provide assistance to AASTU as it establishes itself as a new university.

"Our engagement with AASTU will be very much a two-way partnership. Ethiopia is experiencing rapid social, cultural, and economic change and is embarking on an ambitious national development programme. We feel we have much to learn from working with our colleagues in Addis Ababa as they enter this new and exciting phase of Ethiopian history."

RESEARCH BYTES



NFB Teaches Kids How To Mend Broken Hearts at Galway Science and Technology Exhibition

Thousands attended the National University of Ireland Galway (NUIG) for the final day of the Galway Science and Technology Festival. NUIG helped host the final day with over 100 interactive exhibits at various locations around the campus. The event followed two weeks of science and technology events, including visits to around 180 schools across the city and county.

Researchers from the Network of Excellence for Functional Biomaterials visited four schools throughout Galway city and county during the festival. The NFB also hosted four workshops on the main exhibition day. The workshop, titled “How to Mend a Broken Heart,” teaches primary students the anatomy,

physiology and disease of the heart through a series of hands-on activities. A 15-minute interactive presentation was given describing how the heart works to pump blood. The students were taught how a heart attack happens and how scaffolds can be used to fix damaged heart tissue. After the presentation students acted as tissue engineers to mend “damaged” heart shaped cookies using various decorations representing materials for scaffold development.

Several Galway schools with colourful exhibits based on health and life-science also attended the festival. Leading science and technology organisations also presented displays that gave insights into the cutting-edge products they



✦ To watch a video of the activity, please visit: https://www.youtube.com/watch?v=rrv_wx27qwQ

develop and manufacture. Additionally, free family shows took place throughout the day on topics such as research, education, industry and the environment.

MHealth: Using Technology To Tackle Health Challenges

THE MHEALTH RESEARCH GROUP WAS RECENTLY LAUNCHED IN NUI GALWAY IN RESPONSE TO A RAPIDLY GROWING, MULTIDISCIPLINARY NICHE AREA OF RESEARCH ACTIVITY. MHEALTH RESEARCH INTEGRATES SEVERAL DISCIPLINES INCLUDING PSYCHOLOGY, MEDICINE, INFORMATION TECHNOLOGY, HEALTH ECONOMICS, AND ENGINEERING.

Mhealth (mobile health) is the practice of medicine, public health and allied healthcare or self-care supported by mobile devices (e.g. smartphones, tablet computers, wearable activity monitors). Many of the tech giants such as Apple and Google have embraced and accelerated the Mhealth movement by developing and including applications (apps) on their devices such as HealthKit and Fit app. The use of smartphones has risen exponentially globally and shows no sign of abating. Among the world's population of 7 billion there are over 5 billion mobile devices and over 90% of users have their mobile device near them 24 hours a day. In Ireland alone, there were 5,626,484 mobile phone subscriptions at the end of June 2014 meaning that there are more mobile phones than people and this number is set to rise. These new health apps have really captured the public imagination allowing for unobtrusive self-monitoring and the dawn of the 'quantified self' movement as a potentially major aspect of health improvement.

These rapid technological developments and the widespread adoption of smartphones could provide an effective mechanism for tackling ongoing concerns and challenges related to the health of the global population. The development of these and other novel mobile technologies provide a unique opportunity for researchers in population health to track real-time, continuous, accurate and objective measures of health indices and related behaviour. At the same time mobile devices also provide a potentially very powerful platform for delivering behavioural interventions and providing health relevant feedback to users.



▲ ABOVE: Dr Jane Walsh, Leader at Mhealth Research Group, NUI Galway.

Mhealth interventions have the potential to overcome many of the barriers to behaviour change identified in previous research, such as access to information. It also provides flexibility to participants to engage with the educational content of an intervention in any context or time that provides an opportunity. The use of such devices enable the provision of ongoing monitoring (self and by health professionals) and support, whilst improving services by giving patients convenient access to detailed, personalised feedback.

There is emerging evidence that well-designed Mhealth interventions can effectively change patient health-related behaviour, improve patient knowledge and support for active involvement in self-management and lifestyle change leading to better health outcomes. One such randomised controlled trial conducted by Dr Liam Glynn here in NUI Galway (SMART MOVE) found that the use of a smartphone application in a primary care setting

could increase physical activity, decrease weight and blood pressure compared to controls. Mhealth research affords a real opportunity to study, understand, and positively affect human behaviour. Notwithstanding early positive results, it is critical in the future that Mhealth intervention system developers work closely with behavioural scientists to ensure that interventions are informed by relevant behavioural theory. Health Psychologists are leading the development of the scientific methods for studying behaviour change, with the potential to significantly enhance public health research through employing theory-linked, evidence-based behaviour change techniques.

The NUI Galway Mhealth group has recently secured funding from the Irish Research Council, Enterprise Ireland and the ICGP to conduct research that harnesses new digital technologies for health behaviour change. NUI Galway has internationally recognised research strengths in the area of health psychology, medicine, information technology, health economics and engineering it is ideally placed to lead in this exciting interdisciplinary area of applied science.

The Mhealth Research Group will host the inaugural Mhealth Conference in NUI Galway on 9th June 2015 (supported by the Whitaker Institute and the Irish Research Council). For further information contact Dr Jane Walsh at jane.walsh@nuigalway.ie or visit: <http://www.nuigalway.ie/psychology/mhealth.html>

By DR JANE WALSH

Leader at Mhealth Research Group, NUI Galway

Advancing Public Policy to Combat Violence Against Women and Girls

A NEW RESEARCH PROJECT AT NUI GALWAY LED BY DR NATA DUVVURY AN FUNDED BY THE UK'S DEPARTMENT FOR INTERNATIONAL DEVELOPMENT WAS LAUNCHED IN FEBRUARY 2015. THE PROJECT WILL GIVE POLICY-MAKERS WAYS OF ESTIMATING THE SOCIAL AND ECONOMIC COSTS OF VIOLENCE TO NATIONAL ECONOMIES.

A new research project at NUI Galway led by Dr Nata Duvvury an funded by the UK's Department for International Development was launched in February 2015. The project will give policy-makers ways of estimating the social and economic costs of violence to national economies.

The University will lead an international team comprising Ipsos MORI, London, UK and the International Centre for Research on Women (ICRW), Washington DC, USA on the GBP£1.5 million, three-year project. The ambitious project will take a multi-disciplinary approach, involving experts in economics and the social sciences, including political science, sociology, gender studies, public health and psychology.

The research aims to pinpoint identifiable links between violence against women and girls (VAWG) and the economic impact this has on nations at differing stages of development. The research will be undertaken in three countries – Ghana, Pakistan and South Sudan – representing fragile, conflict affected and/or low-middle income states. The project will survey over 4,500 women across those countries and will carry out in-depth interviews with survivors of VAWG.

By producing new empirical research and evidence on the economic and social costs of VAWG, the research project will strengthen the argument for resources to implement laws, provide health and social support services and to mobilize communities to shift the social norms that underpin VAWG.

The project is part of the UK Department for International Development's investment of £25 million over five years, in a pioneering violence against women and girls Research and Innovation



▲ ABOVE: Dr Nata Duvvury, Co-Director of Centre for Global Women's Studies.

programme called 'What Works to Prevent Violence'. Tackling violence against women and girls is a top priority for the UK government. This programme is driving innovation, and will generate ground-breaking new evidence, and inform new prevention programmes on the ground.

According to Dr Nata Duvvury, an established global expert in field, and Co-Director of Centre for Global Women's Studies at the National University of Ireland Galway: "Violence against women and girls is a global issue. We need an immediate, pragmatic, informed and coherent response across nations. We understand today, more than ever before, the debilitating impact it has on individuals, families and communities. What we now need to understand are the myriad impacts of violence on the economy and society, we can then identify which interventions need to be prioritised for the benefit of individuals and society as a whole."

Innovative Economic Analysis

There is growing interest to estimate the socio-economic impact of violence against women in many parts of the world. In a previous study led by Dr Duvvury, on costing domestic violence against women in Vietnam, the estimated loss of productivity, out-of-pocket expenditures, and foregone income for households came to about 3.19% of GDP. The project plans to further advance this frontier using innovative quantitative and qualitative research methods to capture economic and social costs at individual, household, community and national levels.

"The importance of the potential research findings to policy makers, practitioners, communities and families cannot be overstated. Building on this evidence is crucial to create a better understanding of the tragic consequences of violence against women and girls – not only as a gross violation of human rights, but as a global economic issue. With such evidence, we have the potential to catalyse investments into the prevention and response to violence against women," said Stella Mukasa, Director, Gender, Violence and Rights at the International Centre for Research on Women.

The research team led by Dr Nata Duvvury at the National University of Ireland Galway includes Dr Stacey Scriver, Post-Doctoral Researcher and Project Coordinator, Global Women's Studies, Dr Srinivas Raghavendra, Lecturer, School of Business and Economics, Sinead Ashe, Post-Doctoral Researcher, Global Women's Studies, and Dr Diarmuid O'Donovan, Senior Lecturer, School of Medicine, NUI Galway.

By DR NATA DUVVURY
Co-Director of Centre for Global Women's Studies

NUI GALWAY STUDENTS HOST THE INAUGURAL UNDERGRADUATE RESEARCH CONFERENCE. THE EVENT BRINGS TOGETHER STUDENTS AND STAFF TO BE A KEY ELEMENT OF THE RESEARCH CALENDAR FOR THE UNIVERSITY FROM 2015.

The First Ever NUI Galway Undergraduate Research Conference



On Thursday 19th March, the first-ever Undergraduate Research Conference organised by and for students was held at NUI Galway. The conference was organised in response to a groundswell of research among undergraduate students and brought together undergraduates

who discussed their research for their educational, professional and career development on research topics ranging from biology, to philosophy to sociology.

A brainchild of second year Commerce students Ben Coady, Brian Dooley, Jason Carey, Evan Wynne and NUI Galway staff member, Lorraine Tansey, the conference was funded by EXPLORE, a collaboration between NUI Galway and NUI Galway Students' Union. The purpose of EXPLORE is to encourage innovation, enterprise and creativity among staff and students.

Opening the event, Professor Lokesh Joshi, Vice President for Research said "We are very much a research-led university. There is a vibrant and exciting research ethos among students at undergraduate level, postgraduate and PhD level. This event provides a platform for students to share their work, and for other students and members of the public to learn and explore a number of concepts around research". He added "such early exposure to research, especially through a conference environment, supports our student body to investigate future research breakthroughs".

The discussion clearly conveyed NUI Galway's commitment to supporting the development of research among the undergraduate student body. Attendees gained valuable skills in presenting and communicating their research as well as experience in attending a research conference. Dr Maria Gallo, St Angela's College Sligo, partners of the conference said, "Undergraduate students across the University are involved in some interesting and valuable research projects. This conference offers students a unique opportunity to share their research with their peers as many of them may be considering postgraduate study or a research related career."

The conference has brought together students and staff of NUI Galway to engage with undergraduate research across disciplines.

For more information visit: www.nuigalway.ie/undergrad-research

By ENA BROPHY
Research Office



THE WORD ON THE tweet

By ENA BROPHY Research Office

HERE ARE SOME OF THE EVENTS, MENTIONS AND PERSPECTIVES FROM OUR SOCIAL MEDIA CONVERSATIONS OVER THE LAST NUMBER OF MONTHS.



Research @ NUIGalway @ResearchatNUIG Jan 8
Delighted to show off some great Insight research to Minister @Damien_English @nuigalway @ResearchatNUIG



Research @ NUIGalway @ResearchatNUIG Jan 21
@eilionoirflynn #ERC grantee explains her Voices of Individuals project @RIAdawson #H2020 @ERC_Research @nuigalway



Research @ NUIGalway @ResearchatNUIG Feb 6
Michael D.Higgins President of Ireland speaking at The Human Right to Health @IrishCentreHR @ResearchatNUIG



ROUTE-TO-PA @RouteToPA · Feb 9
RT @RouteToPA #RouteToPA #horizon2020 project kick-off meeting



Research @ NUIGalway @ResearchatNUIG · Feb 18
New appointments to the ERC Scientific Council and renewal of Prof Nicholas Canny @nuigalway



Research @ NUIGalway @ResearchatNUIG · Feb 21
Congratulations to @nuigalway researchers who received six awards @RIAdawson Charlemont awards



Research @ NUIGalway @ResearchatNUIG · Feb 22
New speakers of Irish: shifting boundaries across time and space @nuigalway @CKlatNUIG



Research @ NUIGalway @ResearchatNUIG · Feb 22
Was the demise of the Celtic Tiger the saviour of Irish Theatre? @nuigalway @IrishTimes



Research @ NUIGalway @ResearchatNUIG · Feb 23
RT @johnbreslin Lots of @LegoAcademics spotted last week who do @ResearchatNUIG @nuigalway



Research @ NUIGalway @ResearchatNUIG · Feb 23
Registration open for 7th Int. Disability Law Summer School @nuigalway 22-26 June @NUIGCDLP



Research @ NUIGalway @ResearchatNUIG · Mar 2
ICT 2015 Innovate, Connect, Transform on 20-22 October in Lisbon. Save the date! #H2020



NUI Galway @nuigalway · Mar 9
NUI Galway Conferences to Boost Local Economy by €7m in 2016



Research @ NUIGalway @ResearchatNUIG · Mar 10
Talking is a sign of strength @PleaseTalkorg @nuigalway



Research @ NUIGalway @ResearchatNUIG · Mar 13
Congratulations to @nuigalway researchers and community partners who have won 6 @IrishResearch awards



Research @ NUIGalway @ResearchatNUIG · Mar 13
Can't make it to #innovatingwest ? Tune in live from @nuigalway all day today.



Research @ NUIGalway @ResearchatNUIG · Mar 17
Taoiseach @EndaKennyTD launches Global Sustainability Centre today in #Castlebar #nuigalway



Research @ NUIGalway @ResearchatNUIG · Mar 19
"Undergraduates @nuigalway have the opportunity to change the world through research & innovation" Prof Lokesh Joshi

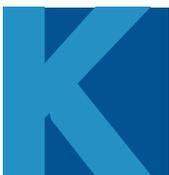
 /NUIGalwayResearch

 @nuigalway | @enabrophy | @ResearchatNUIG



Mapping Mobility Milestones and Biographies

NEW NUI GALWAY RESEARCH INVESTIGATES ROLE OF LIFE EVENTS IN SUSTAINABLE TRANSPORT POLICY



Key life events such as the arrival of first child, moving home, the transition from education to work, or retirement can coincide with changes in people's transport and mobility practices. For example, people might switch

from cycling to car-based commuting when their family gets bigger or when they move further away from their workplace. Understanding both continuity and change in people's mobility biography can advance knowledge of current mobility patterns and how to either encourage or transform them. At the same time, individual mobility biographies shape and reflect societal conditions. Linking individual mobility biographies to the histories of key transport policies and developments can thus cast new light on the causes and consequences of (un)sustainable mobility practices, most notably car dependency.

Dr Henrike Rau and Richard Manton (School of Political Science and Sociology and Whitaker Institute) have developed an innovative social survey method to map individuals' mobility biographies and key mobility milestones, including passing the driving test and purchasing the first bike or car. Survey findings will then be linked to major developments in the modern Irish transport system, to identify possible connections between individuals' biographies, policy and wider societal and infrastructural conditions. The research will also produce policy recommendations that focus on these milestones to encourage more sustainable mobility practices such as cycling, walking and public transport use.

The study of mobility biographies is the latest element of the successful CONSENSUS (Consumption, Environment and Sustainability) collaboration between NUI Galway and TCD, which has received more than €1.4m in EPA Ireland funding since 2009 (www.consensus.ie). It also builds on previous CONSENSUS mobility research led by Dr Henrike Rau on the potential role of teleworking and workplace travel plans in sustainable transport policy and practice.



Translation of Principal Investigator Knowledge

THE SCIENTIFIC LANDSCAPE HAS BEEN CHANGING DRIVEN BY INDUSTRY NEEDS, NATIONAL AND INTERNATIONAL RESEARCH FUNDING PROGRAMMES AND DEVELOPMENT OF RESEARCH COMMERCIALISATION AND KNOWLEDGE TRANSFER ACTIVITIES OF THIRD LEVEL INSTITUTIONS AND PUBLIC RESEARCH ORGANISATIONS. THESE APPROACHES ARE DESCRIBING THE CHANGING MISSIONS OF PUBLIC SECTOR RESEARCH, THE EVOLUTION OF UNIVERSITIES AND THE TRANSFORMATION OF THE RELATIONSHIPS WITH THEIR ENVIRONMENTS.



Scientists taking on the role of principal investigators are the linchpins of the transformation that has taken place in university and public research systems. Principal investigators shape research avenues, coordinate

actors within research programmes, and bridge academia and industry. PIs in undertaking their role engage in a variety of practices - focusing on scientific discipline, innovation and problem solving, sharing new paradigms and brokering science.

TOPIK is a joint international research consortium between NUI Galway, Grenoble Ecole de Management, University of Otago and Dublin Institute of Technology led by Dr James Cunningham, Director of the Whitaker Institute that brings together an international multidisciplinary group of researchers who are pioneering research and advancing our knowledge into the realities that scientists as principal investigators face in leading and managing large scale funded research projects.

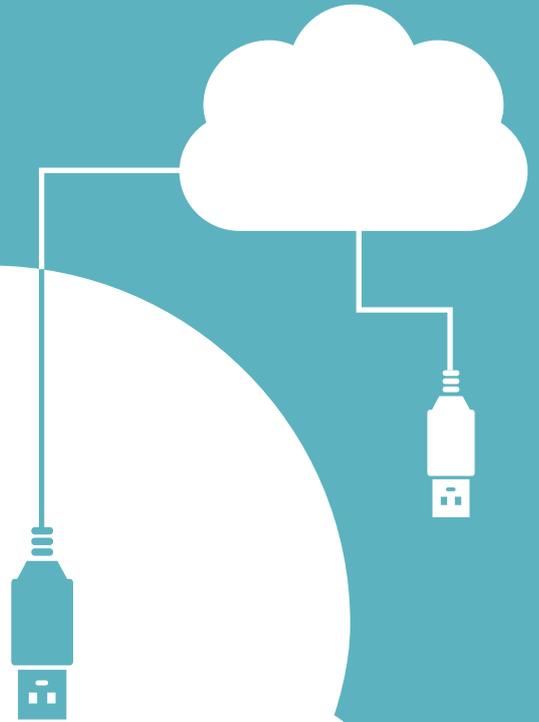
Insights from empirical research to date find that very successful PIs have a clear vision of scientific contribution, have a proactive

strategic posture to shape new avenues, are open to different forms of collaboration, are motivated by the prioritisation of new knowledge and strategise consistently about achieving their vision. Moreover, PIs face political and environmental, institutional and project based inhibiting barriers. PIs also face managerial challenges around project management and project adaptability and the managerial role is an intensive part of their engagement with research.

The TOPIK consortium have developed some resources for PIs including a self evaluation tool, a virtual game for post doctoral students and early career researchers and a number of research briefs. In December as part of TOPIK activities a workshop was held for PhD students from a range on disciplines that focused on positioning your research for impact which was supported by REAP funded by the HEA. An ebook on Positioning For Impact on your Scientific Journey will be released in early 2015.

By **ANGELA SICE**
Development Officer, Whitaker Institute

CLOUD 2014



THE EVOLVING OPEN SOFTWARE SYSTEMS (EVOSS) RESEARCH GROUP HOSTED AN INDUSTRY-FOCUSED EVENT ENTITLED 'CLOUD COMPUTING: TOWARDS ENLIGHTENMENT' ON FRIDAY OCT 31, 2014. ATTENDED BY 60 DELEGATES, THE EVENT WAS SUPPORTED BY THE IRISH SOFTWARE RESEARCH CENTRE (LERO), WHITAKER INSTITUTE, AND THE BUSINESS INFORMATION SYSTEMS DISCIPLINE.



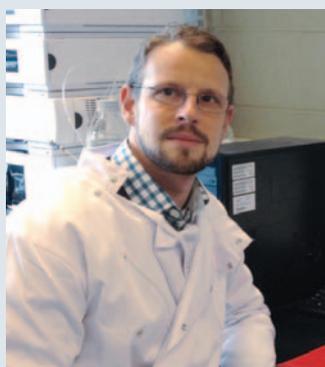
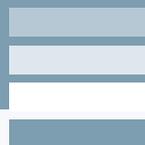
The highly successful event presented case studies of how cloud computing has been successfully leveraged by industry, lessons learned, what to do (and not to do); a structured discussion on cloud benefits,

pitfalls and opportunities; and a talk on how cloud computing impacts business models, presenting leading research on this topic happening at NUI Galway. The group's research on cloud computing is extensive, and cloud computing has become a core part of the SFI-funded research team.

Companies attending included multiple delegates from Avaya, IBM, HP, Cisco, AltoCloud, CInfinity, Fintrax, BuilderEngine, Marrakech/Capita, OpenJaw, Schneider-Electric, Magic Media, Celtrak, students from the School of Business & Economics' MSc Cloud Computing Research programme, and many others.

For more info, visit: <http://cloud2014.eventbrite.ie>

RESEARCH PUBLICATIONS



A new HPLC method for the detection of iodine applied to natural samples of edible seaweeds and commercial seaweed.

Dr Udo Nitschke and Dr Dagmar Stengel (Botany and Plant Science and Ryan Institute)

Food Chemistry 172: 326-334

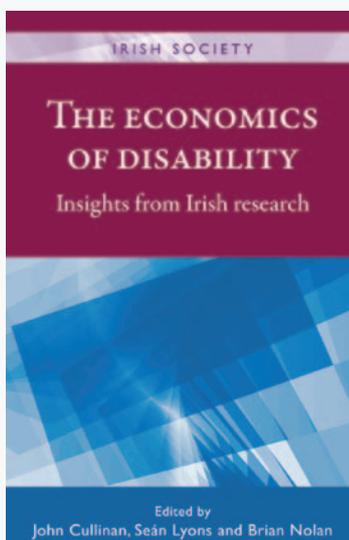
New Method for the Detection of Iodine in Edible Irish Seaweeds

As part of the SFI-funded project “Iodine in commercially valuable seaweeds: variability, pathways and implications for industrial applications” NUI Galway researchers Dr Udo Nitschke and Dr Dagmar Stengel (Botany and Plant Science and Ryan Institute) have developed a new analytical method to quantify iodine in seaweeds and algae-derived products. Through specific adaptation of a standard HPLC system, their method is cost-effective, fast and accurate and has been successfully applied to several edible species of brown, red and green seaweeds: for the first time, iodine levels in Irish seaweeds are documented. Identifying natural sources of iodine has significant human health implications, but accurate assessment of human exposure to marine-derived iodine has been hindered

by a lack of research capacity (analytical techniques) and scientific data (e.g. iodine present in the marine biosphere).

This research has several applications. Iodine is often denoted as healthy ingredient in marine food products and supplements. However, human demand for iodine differs with age, implying that recommended intake levels vary greatly. Both a lack of iodine and an excessive intake can have health implications. Thus, the work supports future applied research in the areas of food and nutrition and will help to detect iodine sources and pathways of losses during processing employed ‘from field to fork’.

The study is available at <http://dx.doi.org/10.1016/j.foodchem.2014.09.030>



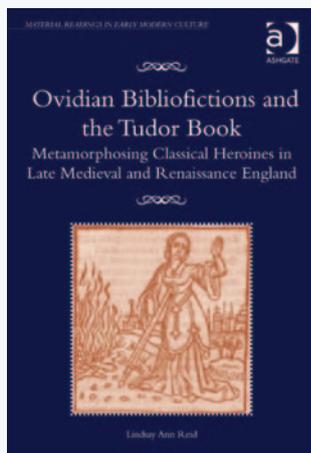
The Economics of Disability: Insights from Irish Research

J Cullinan, S Lyons and B Nolan

Manchester University Press, December 2014

Dr John Cullinan, Lecturer in Economics and member of the Institute for Lifecourse and Society, has co-edited this book with Professor Seán Lyons of the Economic and Social Research Institute and Professor Brian Nolan of Oxford University. It brings together research relating to the economics of disability in Ireland and considering topics such as social inclusion,

poverty, education, the labour market, living standards and public policy. It also considers issues of specific relevance to children, working-age adults and older people with disabilities, providing important evidence that can help improve disability policies, services and supports across the lifecourse. Each chapter presents a clear and non-technical treatment of the specific topic under consideration, making it accessible to a greater number of interested readers. In doing so, it provides an important addition to our knowledge and understanding of the economics of disability and will serve as a useful and up-to-date resource for a range of interested parties both in Ireland and internationally.

REVIEW OF BOOKS, ARTICLES
AND ALL OTHER PUBLICATIONS

Ovidian Bibliofictions and the Tudor Book

Dr Lindsay Ann Reid,
School of Humanities.

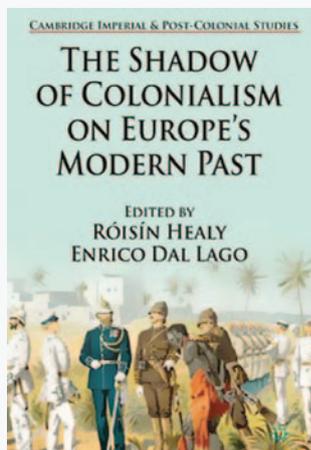
Ashgate, November 2014,
Moore Institute

Ovidian Bibliofictions and the Tudor Book examines the historical and the fictionalized reception of Ovid's poetry in the literature and books of Tudor England. It does so through the study of a particular set of Ovidian narratives—namely, those concerning the protean heroines of the Heroides and Metamorphoses.

In the late medieval and Renaissance eras, Ovid's poetry stimulated the vernacular imaginations of authors ranging from Geoffrey Chaucer and John Gower to Isabella Whitney, William Shakespeare, and Michael Drayton. Ovid's English protégés replicated and expanded upon the Roman poet's distinctive and frequently remarked 'bookishness' in their own adaptations of his works. Focusing on the postclassical discourses that Ovid's poetry stimulated, Ovidian Bibliofictions and the Tudor Book engages with vibrant current debates about the book as material object as it

explores the Ovidian-inspired mythologies and bibliographical aetiologies that informed the sixteenth-century creation, reproduction, and representation of books. Further, author Lindsay Ann Reid's discussions of Ovidianism provide alternative models for thinking about the dynamics of reception, adaptation, and imitation.

While there is a sizeable body of published work on Ovid and Chaucer as well as on the ubiquitous Ovidianism of the 1590s, there has been comparatively little scholarship on Ovid's reception between these two eras. Ovidian Bibliofictions and the Tudor Book begins to fill this gap between the ages of Chaucer and Shakespeare by dedicating attention to the literature of the early Tudor era. In so doing, this book also contributes to current discussions surrounding medieval/Renaissance periodisation.



The Shadow of Colonialism on Europe's Modern Past

Róisín Healy and Enrico Dal Lago (Humanities & Moore Institute), eds.,

Palgrave, 2014, Launched on January 28 2015 by Prof. Susanne Lachenicht, University of Bayreuth and former Marie Curie Fellow with the Moore Institute.

Scholars have generally assumed the objects of colonialism to have been non-European peoples, especially those living in Africa and Asia. Acknowledging the significance of current historiographical debates about different colonial experiences, *The Shadow of Colonialism on Europe's Modern Past* breaks new ground in investigating the extent to which European peoples living in Europe were also subjected to colonialism. The image of the shadow, with its connotations of darkness, distortion, and elasticity, highlights the

pervasive, yet uneven, influence of the ideologies and practices of colonialism across the European continent and its consequences for the lives of ordinary Europeans in peripheral regions. This shadow reached its height in the century between the 1860s and 1960s, as nation-states were consolidated and colonial empires expanded and then contracted. The chapters of this volume explore this phenomenon in case studies featuring Ireland, southern Italy, Schleswig, Alsace, Poland, Algeria, Bosnia-Herzegovina,

If you would like to have your own research featured in future issues of Research Matters, or suggest other themes for the publication, please email us at: researchmatters@nuigalway.ie

10

research MATTERS

National University of Ireland, Galway,
University Road, Galway,
Republic of Ireland

T: +353 9149 5312
E: researchmatters@nuigalway.ie

www.nuigalway.ie



Follow us on Twitter: [@ResearchatNUIG](https://twitter.com/ResearchatNUIG)



www.facebook.com/NUIGalwayResearch



www.youtube.com/thinkingaboutnuig