



Queen's University Belfast Social Charter Newsletter

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Welcome to this edition of the Queen's University Belfast Social Charter Newsletter. In this volume: Queen's part of Productivity Institute; research breakthrough in intellectual disability and depression; Heart Research UK grant; Degree Plus; research to make 5G communications faster; COVID-19 Research Roundtable Video Series; COVID-19 and Food Podcast; study into mountain lions; and Queen's staff, school and networks recognised.

Queen's part of Productivity Institute to help boost growth and drive wage-growth

Queen's University Belfast is a partner in a targeted research institute which will help boost wage growth and drive up living standards.

The £32m Productivity Institute and a complementary £5m research programme, both funded by the Economic and Social Research Council (ESRC), part of UK Research and Innovation (UKRI), will advance knowledge and inform significant decisions by policy makers and business leaders to increase productivity.

Since 2007, productivity growth in the UK has stagnated. Had productivity in the UK grown in line with its previous trend, the UK economy would be approximately £300bn larger today. Compared to many of the UK's peer nations, such as France, the USA and Germany, UK productivity is lower, and by some estimates up to 20 per cent lower. Understanding and addressing the causes of this is the ultimate aim of ESRC's investment in productivity research. In addition, this research has become more pressing given the need to support economic recovery in the context of the COVID-19 pandemic.

"The productivity problem has been a long-standing one for Northern Ireland and other regions in the UK. I am delighted that Queen's will be helping businesses and policy makers in Northern Ireland make practical interventions that will enhance the local economy and benefit wider society."

Professor Nola Hewitt-Dundas, Queen's University Belfast



Research with Impact:

Breakthrough discovery finds specific protein linked to intellectual disability and depression

A research team led by Queen's, in collaboration with the Center for Regenerative Therapies, Dresden, has found how a specific protein plays a crucial role in the generation of neurons at a specific time and location during brain development.

They discovered how its disruption can lead to intellectual disability and depression in adults.

It is expected this breakthrough will have a major impact on our fundamental understanding of brain development and lead to earlier diagnosis and better treatments for people with certain brain disorders.

"We hope this discovery will pave the way for earlier diagnosis, earlier interventions and better treatment for people with a brain disorder, such as depression."

Dr Vijay Tiwari, Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast



Queen's project to prevent failure of blood vessel grafts receives Heart Research UK grant

A project at Queen's University Belfast aiming to develop a new method of making grafted blood vessels more resilient has been awarded a grant of over £145,000 by national charity Heart Research UK.

Coronary heart disease (CHD) occurs when one or more of the blood vessels that supplies the heart muscle with oxygen-rich blood becomes blocked. Untreated, this can lead to angina, heart attack and heart failure. CHD is the single biggest killer in the UK.

One of the current treatments is coronary artery bypass graft (CABG) surgery where a grafted blood vessel is used to bypass the blockage, restoring blood flow to the heart. Although CABG is very effective, over time the grafted blood vessel itself often becomes blocked.

The project will use a range of laboratory models to test two key compounds that are important in promoting resilience in grafted vessels.

"By increasing the resilience of grafted vessels, we will decrease the need for extra surgeries and procedures, easing the strain on our health service and reducing the amount of medical intervention a patient needs."

Dr Denise McDonald, Wellcome-Wolfson Institute For Experimental Medicine, Queen's University Belfast



Education with Social Purpose: Stand out from the crowd with Degree Plus

If you, or someone you know, is commencing study at Queen's in September, this might be just the story you need to read!

DegreePlus is an employability award that allows students to gain formal recognition and a certificate for the extracurricular experience gained while at Queen's.

There are over 100 verified activities to choose from, including extracurricular work experiences, community and voluntary work, global opportunities to work or study abroad, as well as early professional development activities.

It is called DegreePlus because it gives students the opportunity to receive a certificate at graduation, on top of their degree. The award enables them to articulate skills and experience, with the achievement verified on the QGIS Student Record.



2,000+ students earn DegreePlus each year

Award is sponsored by employers

Make friends, build networks

Breaking Boundaries to Produce New Knowledge: Queen's researcher awarded five-year research fellowship to make 5G communications faster

Dr Nidhi Simmons, a research fellow from the Centre for Wireless Innovation, within the Institute of Electronics, Communications and Information Technology (ECIT) at Queen's University, has been awarded a five-year research fellowship from the Royal Academy of Engineering to make delays in wireless networks a thing of the past.

Dr Simmons will lead the programme which will help to deliver ultra-reliable low-latency communications (URLLC) within 5G and 5G+ networks. It is hoped that the technology will contribute to the widespread adoption of delay sensitive applications such as autonomous driving and industry automation.

During the programme, Dr Simmons will work with leading experts in artificial intelligence, wireless communications and low-latency communications from across the globe to deliver her vision of near zero-latency wireless communications.

"During this Covid-19 pandemic, it is our communications infrastructure that has been instrumental in keeping us all connected. Nonetheless, while interacting on social media platforms, we have all experienced broken video calls and delays in our conversations. Through this research, it is my goal to make delays a thing of the past and enable truly instantaneous communications."

Dr Nidhi Simmons, a research fellow from the Centre for Wireless Innovation, ECIT, Queen's University Belfast

Civic Culture and Intercultural Dialogue: COVID-19 Research Roundtable Video Series

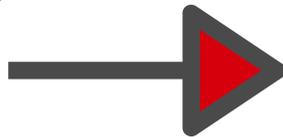
The fifth, and most recent COVID-19 Research Roundtable, has been released with a distinguished panel of experts joining Professor Emma Flynn to look at the wider ramifications of the COVID-19 pandemic for our health care systems.

Queen's University academics Professor Mark Lawler and Dr Tom Walker are joined by Professor Mary Horgan, President of the Royal College of Physicians of Ireland; and Professor Richard Sullivan, WHO advisor and Professor of Cancer and Global Health at King's College London.

Other videos in the series include:

- Covid-19 and the Arts
- Are we really all in this together?
- Putting Bread on the Table
- Looking out for Big Brother

To view the videos, click here



Equality and Excellence: iRise at Queen's University nominated for award

iRise, the black, Asian, minority ethnic & international staff network at Queen's has been nominated in the 'Best Race Initiative' category of the forthcoming NI Equality and Diversity Awards.

This year's award winners will be announced online.

For more information on the iRise network, click on the image below.



Sustainability:

Study shows how mountain lions adapt their behaviour to save energy to survive on mountains

Research led by Queen's has shown how mountain lions (also known as pumas or cougars) adapt their behaviour to survive in steep mountains by travelling more slowly when they are climbing and descending, and attempting to traverse around steep slopes.

The study demonstrated that mountain lions have an ability to assess their surrounding terrain and utilize an energetically efficient series of walking gaits.

This is important because under current scenarios of climate change and habitat loss, many wild animals, especially large predators, are being forced to move into novel energetically challenging environments as the usual areas they inhabit are increasingly being occupied by humans. Consequently, the areas that animals move into heighten their energetic costs and effect the decline of populations.

"With mountain lion populations being challenged by increasing human activities and their lowland habitats rapidly decreasing, individuals that can survive within mountainous habitats will be crucial for the stability of the population."We have discovered how mountain lions survive in mountains to conserve energy which allows them to travel and survive in steep terrains."

Dr Carolyn Dunford, The School of Biological Sciences, Queen's University Belfast

Covid-19 and Food podcast

In the fifth episode of the COVID-19 and Food Podcast, Conservation biologist Dr Neil Reid discusses the links between Covid-19 and biodiversity, wildlife and the environment.

The episode explores if world wildlife trade should be banned; what impact will COVID19 have on biodiversity and asks if the environment fallen off the agenda as the world struggles to manage a pandemic.



Recognising and Rewarding Contributions from Staff and Students: The Graduate School at Queen's Wins Award For Best Student Experience

The Graduate School at Queen's University Belfast has won the award for Best Postgraduate Student Experience Initiative in this year's UK-wide Find a University's Postgrad Awards.

The award recognised the School's agile response to the Covid19 crisis which saw it quickly introduce a new virtual programme of well-being, training and development event for postgraduate students.

The Graduate School - formerly the old university library dating back to 1868 - welcomes thousands of students each year. It supports the development of postgraduate students and encourages them to become Leaders, Thinkers, Communicators and Innovators who are Future Ready. It is a dynamic intellectual hub which creates a community based on challenge between disciplines.

"The Graduate School is a core part of the postgraduate student experience at Queen's; it's a community where students from all cultures and all disciplines come together to connect and socialise, to develop their personal, professional and academic skills, and to be supported by one another and by our team. With the challenges of Covid-19, our students needed this community more than ever, so while the pandemic meant that we had to close the physical doors of our beautiful building for a while, the community remained virtually connected and has continued to thrive.

Professor Margaret Topping, Dean of the Graduate School, Queen's University Belfast



Queen's nurse awarded highest honour from Royal College of Nursing

Dr Sonya Clarke, Senior Lecturer of Education within Children's Nursing from the School of Nursing and Midwifery at Queen's University Belfast has been awarded the prestigious Royal College of Nursing (RCN) Award of Merit for 2020.

Dr Clarke was one of four members across the UK to receive this prestigious award which is the highest honour the RCN can bestow for voluntary service to those who have gone above and beyond to support fellow members.

At present, Dr Clarke has been selected to lead an innovative pre-registration graduate entry Master's (GEMS) programme at Queen's University for children and young people's nursing, which will commence in September 2020.

"The work Sonya has done for the RCN and the greater nursing voice, has been exceptional – showing real leadership and commitment. Sonya exhibits a true passion for children's nursing."She deserves this recognition for her transformational leadership skills, unfailing commitment and inspirational work at a national level, which aimed to benefit patients with musculoskeletal conditions and injuries through the education and upskilling of practitioners in this specialist field."

Dr Mary Drozd, Course Leader MSc Advanced Clinical Practice at the University of Wolverhampton and one of Dr Clarke's nominators

