

Bank of Ireland partners with Tangent, Trinity's Ideas Workspace

Trinity and Bank of Ireland announced a new partnership that will support students and graduates developing innovation and entrepreneurial skills at Trinity's Ideas Workspace (formally known as the Innovation & Entrepreneurship Hub) in January. The partnership will support the development of a new undergraduate certificate in Innovation and Entrepreneurship as well as the expansion of existing programmes such as LaunchBox, the Trinity student summer accelerator programme. Tangent will be housed in a state-of-the-art space that is currently being constructed and that will be co-located with the new Trinity Business School on Pearse Street. For more information visit www.tcd.ie/tangent.

Trinity joins International Sustainable Campus Network

As part of Trinity's annual Green Week, Trinity became the first Irish university to be accepted into the International Sustainable Campus Network (ISCN). Joining the ISCN represents a step forward in Trinity's long-standing desire to promote sustainability and encourage its staff and students to live more sustainable lives. The network is a global forum of 80 members representing top-tier colleges and universities from over 30 countries across the world. This forum supports leading colleges, universities, and corporate campuses in the exchange of information, ideas, and best practices for achieving sustainable campus operations and integrating sustainability into research and teaching.



CAMPUS NEWS

News, views and updates from a year on campus



Photo: Naaise Culhane

Fionnuala Meehan, MD Ireland and EMEA, Google, An Taoiseach, Leo Varadkar, Provost, Dr Patrick Prendergast and Betty Ashe, local community representative

Trinity unveils plans for Grand Canal Innovation District

In July, An Taoiseach, Leo Varadkar T.D., launched a far-reaching plan for the creation of the Grand Canal Innovation District in Dublin. The proposal from Trinity is modelled on innovation districts in cities such as Boston, Toronto, Rotterdam and Barcelona. It will significantly strengthen Ireland's competitive advantage when developing new indigenous companies or competing for foreign direct investment. A memorandum of understanding has been agreed between Dublin's universities and a special government-led advisory group established to develop the new district. This will include the proposed development of a €1 billion Trinity campus at Grand Canal Quay.

Trinity bids farewell to its last two Oregon Maple trees

Trinity unexpectedly bid farewell to one of its iconic Oregon Maple trees in Library Square when it fell overnight during an exceptionally warm summer evening in June. The tree was one of two planted in Library Square in the second quarter of the 19th century. The remaining Oregon Maple tree next to the Long Room had significant decay in some of its major limbs and while remedial works were undertaken to prolong its life, the decay was too great and the tree was removed in July. Library Square, which was originally the site of the Augustinian Monastery of All Hallows, is 265 feet in length and 214 feet in breadth and is surrounded by the University's oldest buildings. There are many archaeological considerations to make before planting replacement trees as beneath Library Square there is a graveyard and at least one water well.

Sneha Singh, merit winner in the Primary category of the writing competition, from Alexandra Junior School



Photo: Noaise Culture

Book of Kells creative competition winners

Trinity's nationwide challenge to get creative and be inspired by one of Ireland's greatest cultural treasures, the Book of Kells, drew entries from a phenomenal 1,500 budding artists and writers, aged from 3 to 83. Students from 52 primary schools and 42 secondary schools, from every county in Ireland, as well as the US and UK got their pens and paintbrushes out and participated in the competition. The six overall winners were announced at a special awards ceremony for all who participated, surrounded by family, friends and teachers.

Trinity community votes on how to eliminate disposable plastics using online tool

Trinity has trialled the use of a new social engagement platform, OneStepCloser, in order to poll the campus population on its decision to eliminate disposable plastics on campus. The University had agreed to replace or eliminate disposable plastics, and to phase out disposable plastic containers and utensils over the next two years. The College community was asked for their input on which plastic should be eliminated first. Almost 3,800 votes from the campus population were recorded and as a result the plastic cups in the Buttery will be phased out.

Trinity signs Strategic Partnership with Columbia University

Trinity has joined forces with one of the U.S.'s top universities, Columbia, to give students from all over the world the opportunity to study in these two globally renowned universities. Trinity's Provost, Dr Patrick Prendergast and Columbia University's Executive Vice President, Professor David Madigan signed the partnership agreement for dual B.A. programmes in the arts and humanities at a special event in Columbia University in February. The newly launched programmes are unique in that students will graduate from the two leading universities with two degrees over the course of four years. They will spend their first two years at Trinity, studying one of four areas – English Studies, European Studies, History, or Middle Eastern and European Languages and Cultures. They will then go on to study at Columbia for their second two years, completing a core curriculum and several majors.



Professors David Madigan & Lisa Rosen-Metsch of Columbia University, Provost, Dr Patrick Prendergast, Rosaree the Columbia mascot, Professor Juliette Hussey, Declan Coogan, Professor Darryl Jones and Professor Zuleika Rodgers of Trinity

The future of Europe and its borders discussion

The post-Brexit future of the Irish border and current challenges to the European project were the focus of a public discussion organised by the Trinity Long Room Hub Arts and Humanities Research Institute in partnership with *The Financial Times* at an event in January 2018. Speakers at the event included senior Irish diplomat, Rory Montgomery; *Financial Times* columnist, Janan Ganesh and Trinity student Marie Sophie Hingst, winner of the 'Future of Europe' essay competition. The discussion focused on a matter at the very heart of Europe's founding freedoms – the border question and the free movement of people, goods and services.

Trinity launches 40 fully funded Provost's Ph.D. Project Awards

Trinity has launched 40 fully funded Ph.D. positions across a wide variety of disciplines. The 40 Provost's Ph.D. Project Awards are open to EU and Non-EU candidates and include an annual stipend of €16,000 for four years. These doctoral awards are generously funded through alumni donations and profits derived from Trinity's Commercial Revenue Unit. A panel of senior academics, chaired by the Dean of Graduate Studies, Professor Neville Cox, reviewed nearly 200 applications and selected 40 projects showcasing the range, depth and quality of research taking place in Trinity.

Trinity students celebrate Holi, the Indian festival of colours

Students at Trinity marked the Indian festival of colours, Holi, in March with a celebration on the College's Front Square. Holi, often referred to as the 'festival of colours', is an Indian festival that bids farewell to winter and marks the emergence of spring and is one of the most widely celebrated Indian festivals worldwide. Organised by Trinity's Indian Society, the celebrations aim to embrace and promote multiculturalism within the College and Ireland. Over 100 students joined in the colourful celebrations.



Students celebrating Holi in front square

Photo: Daragh Cagley



Professor Rhodri Cusack inspects a brain with a helping hand from his son, Calin Cusack

European Research Council awards €3 million to leading Trinity neuroscientist

Professor of Cognitive Neuroscience, Rhodri Cusack, has been awarded an EU European Research Council Advanced Grant valued at €3 million. These highly prestigious awards allow exceptional researchers to pursue ground-breaking research. The award will see Professor Cusack and his team conduct a world-leading research project that will for the first time use neuroimaging to measure the hidden changes in mental representations during infancy and compare them to predictions from deep neural networks. He will investigate the importance of pre-training, the learning that doesn't manifest in behaviour until much later. Professor Cusack's efforts to understand how pre-training during infancy shapes neural representations could revolutionise developmental neuroscience, lead to new advances in artificial intelligence and help us understand why brain injury in infants sometimes affects mental development, but other times does not.

League of European Research Universities

At the start of 2017, Trinity joined the League of European Universities (LERU), a network of 23 leading European universities advocating for the promotion of basic research at European research universities. The College is now an active member of the League, participating in and hosting meetings with its partner universities, contributing to policy papers and supporting LERU's EU lobbying work at a national level. Recent LERU publications and position papers can be read online at www.leru.org/publications and the list of Trinity staff participating on the LERU policy, thematic and network groups is available at www.tcd.ie/about/leru/

Minister Mary Mitchell O'Connor turns the sod on new student residences at Trinity

Minister of State for Higher Education, Mary Mitchell O'Connor, officiated the sod turning of the new student residences in Printing House

Square. This new development on Pearse Street will provide accommodation for 250 students, as well as a student health centre, disability service centre and sports facilities. The development will integrate contemporary architecture with the historic fabric of the city and the University.



Provost, Dr Patrick Prendergast, Minister of State for Higher Education, Mary Mitchell O'Connor, Dean of Students, Professor Kevin O'Kelly, College Bursar, Professor Veronica Campbell

Nobel Laureate Professor William Campbell launches Undergraduate Science Programme

In November 2017, Nobel Prize winner and Trinity graduate, Professor William Campbell returned to his alma mater to launch Trinity's new Undergraduate Science Programme to a packed lecture theatre of secondary students and their teachers. Professor Campbell was awarded the Nobel Prize in Medicine in 2015 for his development of the drug Ivermectin that has almost eradicated river blindness. This work, carried out at Merck pharmaceuticals, was a direct extension of his education on parasitology in Zoology at Trinity. His interest in parasitology started in Trinity, where he was inspired by his professor and well-known parasitologist, Desmond Smyth. Therefore it was particularly appropriate that Professor Campbell launched the new programme which will have its first intake of students in 2018.



Nobel Prize winner, Professor William Campbell, launches Undergraduate Science Programme at Trinity

Predicting the impact of global warming on disease proliferation

Scientists, led by Lecturer in Parasite Biology, Professor Pepijn Luijckx, have devised a method for predicting how rising global temperatures are likely to affect the severity of parasitic diseases. In their study, the scientists used the water flea and its pathogen and measured how processes such as host mortality, ageing, parasite growth and damage done to the host changed over a wide temperature range. They used these measurements to determine the thermal dependencies of each of these processes using metabolic theory. The results showed that the different processes had unique relationships with temperature. This study should help to identify which infectious diseases will have worsened or diminished effects with rising temperatures.

The 'Super-Ranger' badgers that may hold the key to limiting the spread of bovine TB

Aoibheann Gaughran, Ph.D. researcher in Trinity's School of Natural Sciences and a multi-disciplinary team of veterinarians and ecologists have discovered a brand new 'super-ranging' behaviour in badgers, which has major implications for implementing vaccination programmes to limit the spread of bovine tuberculosis (TB). Badgers are a protected species but they can harbour TB and inadvertently transfer it to cattle. Vaccinating badgers against TB is an excellent option to mitigate these risks but to do that effectively it's imperative to understand how badgers move around in the wild. In this study the team describe an entirely new phenomenon - 'super-ranging' - where some males range between two and three times more widely than is typical for other badgers in their social groups, who live in far more rigid territories. In this study, around one in five males adopted this super-ranging behaviour. The researchers hope that by better understanding how badgers move between territories, they will be able to pinpoint where the greater risks for TB transmission lie, which would be extremely valuable information from a disease control perspective.



The Trinity Centre for Literary and Cultural Translation team outside the new Centre on 36 Fenian Street

New home for Trinity Centre for Literary and Cultural Translation

In April 2018, Seamus Heaney's widow Marie Heaney joined Provost, Dr Patrick Prendergast, author John Banville and musicians Tama de Búrca (uilleann pipes), Junshi Murakami (Irish harp) and Meg Stoop (flute), to celebrate the opening of the new premises for the Trinity Centre for Literary and Cultural Translation at 36 Fenian Street. Four long-standing translators of Seamus Heaney's poetry gathered in the Long Room Hub later that day to celebrate Heaney's poetry in translation. The event featured readings of Heaney's poetry in Russian, Hungarian, Polish and Mexican Spanish by Heaney translators and paid tribute to Seamus Heaney's contribution to literature and acknowledged his strong support of the centre. The event also marked the appointment of the Centre's new Director, Michael Cronin, Professor of French, who is taking over from founding Director, Professor Sarah Smyth, Associate Professor in Russian.

Trinity scientists win ERC Consolidator Awards

Two scientists from Trinity, Professor in Genetics, Aoife McLysaght and Dr David Finlay, an Ussher Assistant Professor specialising in immunometabolism, have won prestigious European Research Commission (ERC) Consolidator Grants worth a combined total of €3.8 million to pursue cutting-edge research projects. Professor McLysaght will seek to better understand the relationship between gene duplication and gene expression, with a view to exploring how this relationship affects gene and genome evolution, and how it impacts disease. Dr Finlay hopes to demonstrate how local distributions of nutrients such as glucose, glutamine and leucine affect the immune response in vivo in mice. Professor McLysaght and Dr Finlay's awards account for two of the five ERC Consolidator Grants won by scientists at Irish institutions this year.

The crystals that could help predict volcanic eruptions

Small crystals in volcanic rocks may hold the key to better understanding advance warnings of volcanic eruptions. The crystals form inside the volcano when magma starts moving upwards from depths of up to 30km towards the Earth's surface. The crystals are carried in the erupting magma and often continue to grow as they are being transported. Importantly, they also change in composition on their way to the surface. Dr Teresa Ubide from the University of Queensland and Professor Balz Kamber from Trinity conducted the research using a laser technique to examine the inside of these crystals in a novel way. They discovered that the crystals contain a memory in the form of growth layers that look similar to tree rings. Reading the history from these layers may lead to more effective volcanic hazard monitoring, including for dormant volcanoes.



Science Gallery birthday celebrations on Front Square

Photo: Ivan Rakhmanin@University Times

Science Gallery Dublin celebrates 10 years

In February 2018, Science Gallery Dublin celebrated its 10th birthday with a show-stopping display of pyrotechnics and fireworks in Trinity's Front Square. The University was illuminated as artist Aoife van Linden Tol set off three distinct explosions to celebrate the anniversary. Performers danced and played with fire, setting off a chain reaction of pyrotechnic events. This celebration was inspired by the phenomena of stars and reflects Science Gallery Dublin's programming which aims to ignite curiosity and discovery, explore the unknown, provoke difficult questions and involve the public in the joy and debate around art, science, technology and human progress.

Trinity Creative Challenge Awards 2018

The winners of the Trinity Creative Challenge Awards 2018 were visual artist, Siobhan McDonald with her work entitled *Future Breath* and performance artist, Dylan Tighe with his piece *Pasolini's Salò Redubbed*. The Trinity Creative Challenge was set up to catalyse innovative interdisciplinary projects in collaboration with Trinity staff and students. Siobhan and Dylan each received €15,000 to develop their projects which will be presented within an exhibition or performance context in Trinity later this year. Also, the Centre for Genomic Gastronomy was awarded an additional €10,000 of funding to further develop an artistic project entitled *The Endophyte Supper Club*.



Future Breath by Siobhan McDonald
A project comprised of a series of enquiries into Environmental change – such as city pollution, toxicity and its impact on our health and ecosystems.



Professor Zuleika Rodgers, Dr Niamh McGoldrick (accepting on behalf of Professor Hongzhou Zhang) and Professor Charles Patterson

Trinity’s 2018 Global Engagement award winners announced

The Global Engagement Awards are designed to recognise the exceptional contribution made by staff to global education and research, cultural understanding and global experiences that directly benefits the Trinity community. The awards raise awareness of the University’s profile and supporting the development of students into global citizens. This year’s awardees were Professor Zuleika Rodgers as Programme Director for the dual degree programme with Columbia University, and a joint award for Professor Charles Patterson and Professor Hongzhou Zhang to recognise their work in the development of a partnership with the University of Science and Technology Beijing (USTB).

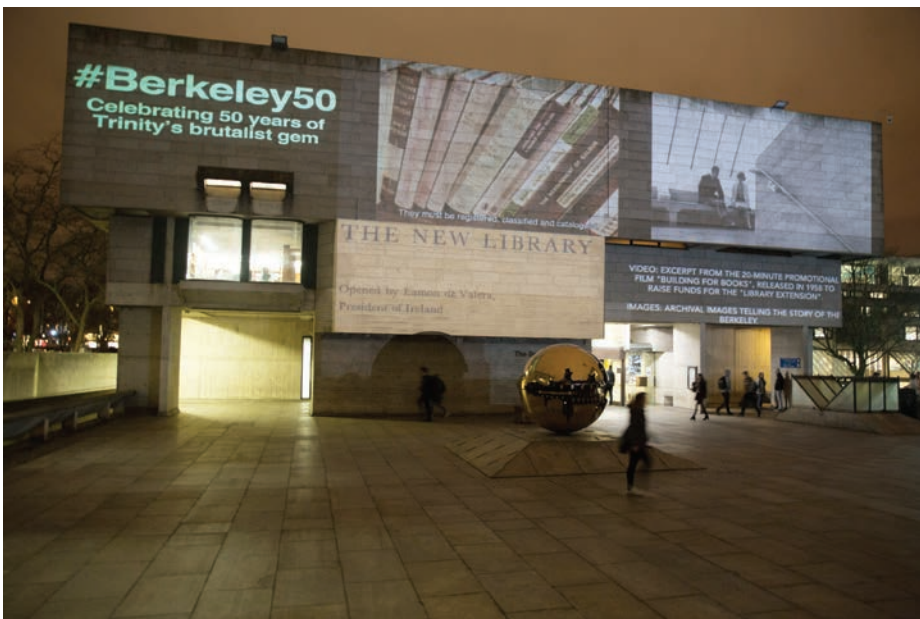
New research shows link between hearing loss and dementia

Ph.D. researcher and Atlantic Fellow David Loughrey from Trinity College Institute of Neuroscience and Global Brain Health Institute has found that hearing loss in older adults is associated with cognitive decline and dementia. The researchers made the findings following a comprehensive review of 36 previous studies from 12 countries involving 20,264 participants, the biggest study to date of hearing loss, cognitive decline and dementia. The results showed that people with age-related hearing loss had an increased risk for cognitive decline and also had a higher risk for cognitive impairment and dementia.



Precious Irish-language manuscripts showcased at conference and exhibition

Medieval Brehon law texts detailing bee-keeping laws and the Irish *Book of Genesis* are among precious Irish-language manuscripts which were the focus of an academic conference held in Trinity in May 2018. Trinity Library’s collection of over 200 medieval and early modern manuscripts written in the Irish language is ranked as one of the most important collections in the world. Covering over 1,000 years of Irish literature and learning, these unique texts shine a light on how Irish society operated and how our ancestors interacted with each other. New research on these Irish-language manuscripts was presented at a conference in Trinity Long Room Hub Arts and Humanities Research Institute. An exhibition in Trinity’s iconic Long Room, and accompanying online exhibition www.tcd.ie/library/exhibitions/irish-manuscripts/, allows the public to enjoy the beauty of these precious manuscripts first hand.

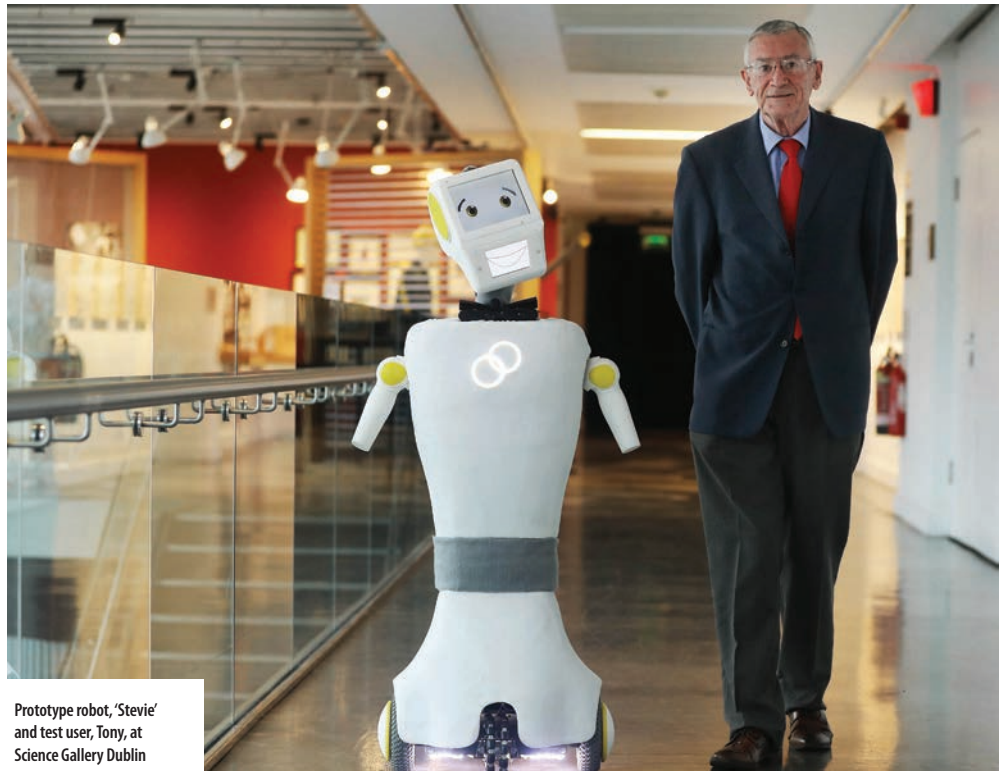


Berkeley 50 Projections

To conclude the Berkeley Library 50 year anniversary celebrations, a series of images was projected onto the façade each evening during the first week of December. The projections showcased some of the wonderful archival materials, event images and videos that featured throughout the year.

Trinity engineers unveil Ireland's first prototype robot for assisted care

Robotics engineers led by Assistant Professor in Mechanical and Manufacturing Engineering at Trinity, Conor McGinn, unveiled the first prototype robot designed to work in assisted care facilities and help the elderly and people living with a disability in Ireland. The robot can perform several routine tasks and engage in social interaction which will help stimulate mental activity. The team behind the robot has secured significant development funding from Enterprise Ireland to move the prototype towards a marketable model by 2021.



Prototype robot, 'Stevie' and test user, Tony, at Science Gallery Dublin



Professor Tom O'Dowd, Colm Brophy TD, Minister Katherine Zappone, Minister Simon Harris, Taoiseach Leo Varadkar, HSE Head of Primary Care, Ann O'Shea, Dean of Health Sciences Professor Mary McCarron, Professor Joseph Barry, School of Medicine

Official opening of HSE Tallaght Integrated Academic Primary Care Centre

In May 2018, Taoiseach Leo Varadkar and Minister for Health Simon Harris officially launched the HSE Tallaght Integrated Academic Primary Care Centre. The centre is the first of its kind in Ireland, enabling multi-disciplinary services that were previously delivered from a number of locations to be delivered on a single site. Trinity's Dean of Health Sciences Professor Mary McCarron commented, "high-quality research, excellence in teaching and innovations in healthcare delivery are happening in this new partnership, all with the aim of providing the best healthcare experience to the people of Tallaght and beyond. The undergraduate training for medical, nursing and midwifery students and the postgraduate training in community health, implementation science and addiction recovery will all add to the quality of people's lives".

New research shows how sugars can revolutionise medicine

Scientists led by Associate Professor in Biochemistry at Trinity, Gavin Davey, have merged the disciplines of biochemistry, mathematics, linguistics and computational biology to create a new coding language to help them interpret the millions of ways in which sugar molecules interact with molecules in the body. The research team is decoding approximately 30,000 genes that generate 100,000 proteins, which has considerably expanded our knowledge of genomics and proteomics. This project allows them to decipher the highly complex manner in which proteins and lipids are modified by sugar molecules. What they are discovering has important implications for treating cancers and neurodegenerative diseases. This interdisciplinary study is being funded by EU Marie Curie and Science Foundation Ireland.

Scientists discover how HIV evades the immune system

Scientists led by Assistant Professor in Immunology at Trinity, Nigel Stevenson, have discovered a new mechanism by which HIV evades the immune system and which shows precisely how the virus avoids elimination. The new research shows that HIV targets and disables a pathway involving a number of biological molecules that are key in blocking viral activity and clearing infection. Despite 40 million people being infected with HIV worldwide, there is currently no cure and current treatment involves anti-retroviral therapy, which prevents disease progression. This discovery opens the door to a new era of HIV research focused on curing people living with the virus.



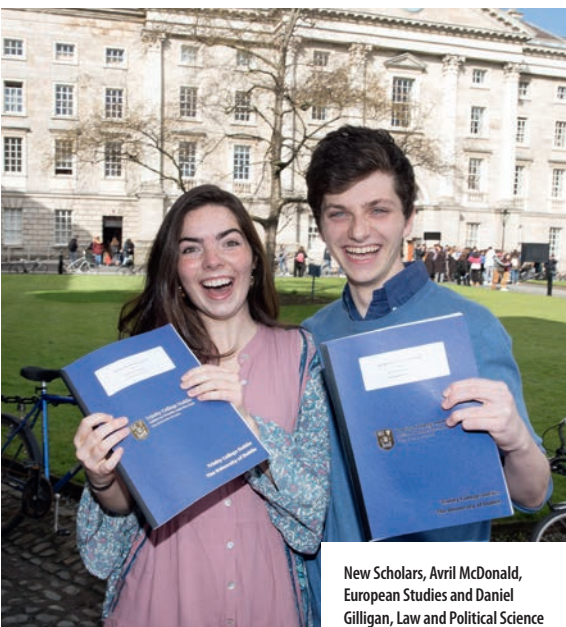
Dr Séamus Lawless and Dr Peter Crooks from Trinity's Beyond 2022, Ireland's Virtual Record Treasury project, and Zoë Reid Senior Conservator, National Archives of Ireland examine original architectural drawings for the Public Record Office

Trinity to digitally recreate seven centuries of Ireland's history destroyed in 1922 Four Courts fire

When Dublin's Four Courts went up in flames on 30 June 1922, seven centuries of Ireland's historical and genealogical records dating back to the 13th century were lost – seemingly forever. However, new technology, historical research and careful archival practice mean that these losses may be recoverable. Historians and computer scientists at Trinity have unveiled plans to bring Ireland's Public Record Office back to life by creating a 3D virtual reality reconstruction of the destroyed building and refilling its shelves with fully-searchable surviving documents and copies of the lost records. The project will bring millions of lost historical and genealogical facts to a global audience and will allow historical research to reach back four centuries earlier than most currently available genealogical resources.

New Scholars and Fellows announcement

Students and academics gathered in Trinity's Front Square on 9 April 2018 to hear the announcement of new Scholars and Fellows which marks the beginning of the annual Trinity Week, a long-established celebration of College life. There were scenes of joy and jubilation as the names of the 73 Scholars, 16 Fellows and two Honorary Fellows were read out by Provost, Dr Patrick Prendergast.



New Scholars, Avril McDonald, European Studies and Daniel Gilligan, Law and Political Science



Art installation *The Radiant Stranger* is launched in School of Physics

The School of Physics has welcomed a new sculpture to the Fitzgerald building. Launched by renowned theoretical physicist Sir Michael Berry on 24 May 2018, the sculpture, entitled *The Radiant Stranger*, is a model of conical refraction. It was designed by Professor James Lunney and fabricated by David Grouse in the Mechanical Workshop in the School of Physics. *The Radiant Stranger* was the name given by the Irish poet Aubrey de Vere (1814 - 1902) to conical refraction, an optical effect predicted in 1832 by William Rowan Hamilton (1805 - 1865) and observed by Humphrey Lloyd (1800 - 1881) in the same year.