

Ussher Assistant Professor in Smart and Sustainable Urbanism



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

Trinity College Dublin.
A history of driving the future.

Trinity & me



As a professor at Trinity College Dublin, I can be a better scientist, raise more research funding and develop my international career.

Dr Rachel McLoughlin

Ussher Assistant Professor in Immunology

Ussher Assistant Professors

Trinity College Dublin is hiring 40 new Ussher Assistant Professors before the end of 2016 to support the delivery of the University's new Strategic Plan 2014-19.

It is part of Trinity's strategy to recruit excellent academics in areas where the University has proven strengths.

There are opportunities right across our field of expertise, which span from science to engineering and from medicine to arts and humanities. It is Trinity's objective to attract new talents from around the world to further its position of excellence.

This is the second time that Trinity has created a distinct set of professorships with the Ussher name to foster early career academics. The latest wave of professorships reflects the success of the first programme. The professorships are named after Archbishop James Ussher, who is often referred to as Trinity's first scholar and who was pioneering and meticulous in his research. They are intended to honour his rigour as a scholar.

At least ten of the new positions will be assigned to our research centres focused on nanotechnologies, biomedical sciences and neurosciences. Opportunities are also available within traditional departments in science and in the arts and humanities, which are all heavily engaged in innovative research. For example, researchers in our arts and humanities institute, the Trinity Long Room Hub, are currently digitizing and contextualizing important historical archives held in our Old Library, and making them available as an online public resource. Substantial mentoring and development support will be available to each of the Ussher Assistant Professors through Trinity's Early Career Mentoring Programme and all of the Ussher Assistant Professors will be encouraged to avail of the resources of the new Teaching, Learning and Research Academy.

Trinity has a mission to promote excellence in research and education – the University sees these two as interdependent, mutually sustaining and driven by a spirit of innovation.

Trinity believes that students and researchers from every discipline benefit from being exposed to the innovation and entrepreneurship culture that we are building through initiatives like our new Trinity Business School. Interdisciplinarity

and cross-fertilisation are intrinsic to Trinity's mission, as is internationalization – creating forty new positions across all disciplines and recruiting from around the world honours all our commitments.

Trinity has a strong tradition of industrial engagement – in the form of industry research grants which represent 25% of the University's operating budget. One of Trinity's most recent collaborations, signed in early September 2015, is with Intel, and it covers talent, research, student mentoring and career development with structured programmes for our PhD students. With Intel, Trinity will be identifying new areas of development and providing a strategic framework for investment and recruitment.

Industrial engagement gives Trinity scientists opportunities to work on applied industry projects. For example in the field of the Internet of Things with the CONNECT Centre, and on an e-learning and adaptive simulation project, ADAPT.

The Ussher Assistant Professors will be joining this vibrant community and helping to grow the University, and to develop bodies of world-ranking research.

Post Specification

The global societal challenge of making cities and human settlements inclusive, safe, resilient and sustainable has been identified as a Sustainable Development Goal. Achieving this goal will require a transition to both smart and sustainable urban systems. The **Assistant Professorship in Smart and Sustainable Urbanism** will progress understanding, explanation and enactment of broad societal transformation for smart and sustainable urban development, providing essential socio-spatial expertise in the analysis of innovations around the globe.

Post Specification

(Competition: 031303)

Post Title	Ussher Assistant Professor in Smart and Sustainable Urbanism
Post Status	5-Year Contract with a view to permanency
Department/Faculty	School of Natural Sciences, Faculty of Engineering, Mathematics and Science Trinity College Dublin, the University of Dublin
Location	Discipline of Geography, Museum Building, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
Reports to	Head of School of Natural Sciences
Salary	Appointment will be made at a maximum of the 8th point of the New Assistant Professor Merged Salary Scale (range €32,450 - €46,615 per annum)
Closing Date	12 noon GMT on Friday 26th February 2016

The successful applicant will complement Trinity's strong research clusters in sustainability, international development, smart sensors and distributive systems, environmental governance and natural capital. The post is open to any research specialism related to smart and sustainable urbanism including, but not restricted to: the governance and politics of big urban data; ICT-enabled behaviour change for optimising urban resource usage; spatial analysis of urban climate change mitigation or adaptation; urban geodesign; urban natural capital and green infrastructure; urban resilience. A strong publication record is expected and the appointee will be required to compete for National and International research funding, as well as leading research within the Trinity Future Cities Research Centre in their area of expertise.

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If you wish to discuss the post informally please contact:
Professor Anna Davies

 daviesa@tcd.ie

Ussher Assistant Professor in Smart and Sustainable Urbanism

Application Details

Applicants **must** provide the following information in applying for this position:

- » Cover letter (maximum 1 x A4 Page)
- » Full curriculum vitae. Candidate's list of publications to include the names and contact details of 3 referees (with e-mail addresses if possible)
- » Research plan (summarizing research to be carried out in the next two years and including details for funding to be sought (2 x A4 pages maximum))
- » Teaching statement (summarising teaching experience and approach (2 x A4 pages maximum))

Applications will only be accepted via eRecruitment - <https://jobs.tcd.ie>

Contact Person:
Eimear Leonard,
Recruitment Partner,
Tel: +353 1 896 1118
Email: eleonar@tcd.ie

Role of the Ussher Assistant Professor

The Ussher Assistant Professor will be required to conduct the following:

Teaching

The successful application will contribute to core undergraduate and postgraduate teaching in their area of expertise within Geography and through cross-disciplinary modules within and beyond the School of Natural Sciences. This includes the development of an on-line module on smart and sustainable cities for the Masters in Development Practice (MDP) which will also be offered as a MOOC. In addition, the successful applicant will also be expected to supervise PhD students.

Research

The successful applicant will be expected to further develop their research profile through the acquisition of National and International research grants, including Horizon2020 and European Research Council funding streams.

Administration

The successful applicant will undertake administrative duties within Geography and the School of Natural Sciences as directed by the Head of School or their nominee. In addition, it is expected that the successful applicant will take on a role within the Trinity Future Cities

Research Centre and build capacity in social engagement and creative entrepreneurship for sustainability within urban environments.

Person Specification

Qualifications

- » A doctoral degree in geography, urban studies, environmental studies, sustainability science, sociology and social studies, planning or an area related to the human dimensions of smart cities
- » An undergraduate degree in geography, urban studies, environmental studies, sustainability science, sociology and social studies, planning or related disciplines

Required Knowledge and Experience

Research

Essential

- » proven record in research and ability to contribute to the research theme: Society, Space and Environment
- » demonstrate research plans which complement the strategic plan of the School of Natural Sciences including the research theme: Smart and Sustainable Planet



- » proven ability or evidence of potential to establish a strong record of research and publication in smart and sustainable cities
- » an ability to conduct research within the area of smart and sustainable cities and to supervise research projects
- » knowledge of recent research in the relevant areas
- » publication of articles in peer-reviewed journals
- » participation in national and international research seminars and conferences

Desirable

- » proven ability or evidence of potential to attract external research funding
- » proven ability or evidence of potential to contribute to global research networks in an area related to smart and sustainable cities
- » evidence of international networking

Teaching

Essential

- » an ability to provide lectures and practical classes (including fieldwork) in Geography and to contribute to teaching within the School of Natural Sciences to undergraduate and postgraduate students
- » an ability to develop and coordinate teaching modules relevant to the BA (Mod) in Geography and cross-disciplinary modules relevant to the School of Natural Sciences
- » evidence of personal contribution and commitment to excellence in teaching
- » excellent communication and interpersonal skills
- » experience of supervising undergraduate and postgraduate dissertations
- » experience of developing new modules and teaching material including on-line learning materials
- » potential to develop, manage and co-ordinate modules and courses, including on-line learning, in a University setting

Desirable

- » experience of using new teaching media

- » experience of developing or delivering teaching through on-line modules
- » experience of working collaboratively and effectively in an inter and multidisciplinary environment
- » potential for recruiting and supervising research postgraduate students
- » experience of Developing new modules including on-line learning materials

Administration

Essential

- » potential to co-ordinate, manage and develop modules and courses in a university setting
- » an ability to use statistical or other relevant tools to analyse assessment and evaluation programmes and to write reports
- » excellent organisational and administrative skills
- » ability to establish targets and goals to support School and College strategies
- » a commitment to student care

Desirable

- » experience of organising research seminars, recruitment initiatives and other activities



Other essential attributes

- » ability to work effectively as member of a team.
- » honesty and integrity
- » good communication skills
- » good organisational skills
- » willingness to contribute to the Discipline, School, College and to the wider community.
- » career driven, enthusiastic and motivated
- » a commitment to own professional development.

The School of Natural Sciences

<http://naturalscience.tcd.ie/>

The School of Natural Sciences, comprising the Disciplines of Botany, Geography, Geology and Zoology, the Centre for the Environment and the TCBR, is one of the largest schools in the Faculty of Engineering, Mathematics and Science and hosts biological, physical and social scientists. The School currently accommodates 40 academic staff, ca. 14 postdoctoral research fellows and ca. 164 postgraduate students (including

89 research and 75 taught students). Its taught programmes are varied as the School offers moderatorships (undergraduate degrees) in Earth Sciences, Environmental Sciences, Functional Biology, Geography, Geology, Plant Sciences and Zoology and contributes to other moderatorships including Neurosciences, Geography and Politics and to the Two Subject Moderatorship (TSM) programme (<http://www.naturalscience.tcd.ie/undergraduate/>). The School has also a major commitment to graduate teaching and supervision and currently hosts three taught masters programmes (<http://www.naturalscience.tcd.ie/postgraduate/>).

The Selection Process in Trinity

- » The Selection Committee (Interview Panel) will include members of the Academic community together with an External Assessor who is an expert in the area.
- » Applications will be acknowledged by email. If you do not have confirmation of receipt within 1 day of submitting your application online, please get in touch with us immediately and prior to the closing date/time.

- » Given the degree of co-ordination and planning to have a Selection Committee available on the specified date, Trinity regrets that it may not be in a position to offer alternate selection dates. Where candidates are unavailable, reserves may be drawn from a shortlist.
- » Outcomes of interviews are notified in writing to candidates and are issued **no later than 5 working days** following the selection day.
- » In some instances the Selection Committee **may** avail of telephone or video conferencing.
- » Trinity's selection methods may consist of any or all of the following:
 - Interviews
 - Delivery of a presentation will be required as part of the selection process
 - References - if a candidate is shortlisted, the listed referees on the candidate's application will be contacted in advance of interview.
- » It is the policy of the University to conduct pre-employment medical screening/full pre-employment medicals.



- » Information supplied by candidates in their application will be used to shortlist for interview. Candidates who do not adhere to the application requirements may not be considered for shortlisting.
- » Applications from non-EEA citizens are welcomed. Non-EEA candidates should note that the onus is on them to secure a visa to travel to Ireland prior to interview. Non-EEA candidates should also be aware that even if successful at interview, an appointment to the post is contingent on the securing of a work permit.

Equal Opportunities Policy

Trinity College Dublin, the University of Dublin is an equal opportunities employer and is committed to the employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community.

Pension Entitlements

This is a pensionable position and the provisions of the Public Service Superannuation (Miscellaneous Provisions) Act 2004 will apply in relation to retirement age for pension purposes. Details of the relevant Pension Scheme will be provided to the successful applicant.

Applicants should note that they will be required to complete a Pre-Employment Declaration to confirm whether or not they have previously availed of an Irish Public Service Scheme of incentivised early retirement or enhanced redundancy payment. Applicants will also be required to declare any entitlements to a Public Service pension benefit (in payment or preserved) from any other Irish Public Service employment.

Applicants formerly employed by the Irish Public Service that may previously have availed of an Irish Public Service Scheme of Incentivised early retirement or enhanced redundancy payment should ensure that they are not precluded from re-engagement in the Irish Public Service under the terms of such Schemes.

Such queries should be directed to an applicant's former Irish Public Service Employer in the first instance.

Trinity College Dublin

Trinity College Dublin is Ireland's leading university on the world stage. Recognised for its transformative research and education conducted at the frontiers of disciplines, Trinity is ranked 78th in the world by the QS World University Rankings 2015.

The pursuit of academic excellence through research and scholarship is at the heart of Trinity's academic endeavour. Trinity is known for intellectual rigour, excellence, interdisciplinarity, and research-led teaching. Home to Nobel prize-winners such as scientist Ernest Walton, writer Samuel Beckett and William C. Campbell, recipient of the 2015 prize in Medicine, Trinity draws visitors from across the world to its historic campus each year, including to the Book of Kells and Science Gallery which capture the university's connection to both old and new.

Trinity accounts for one-quarter of all spin-out companies from Irish higher education institutions, helping to turn Ireland into an innovation-intensive, high-productivity economy. That culture of innovation and entrepreneurship is a defining characteristic of our campus as we help shape the next generation of job creators and global citizens.

Founded in 1592, Trinity is situated at the nexus of tradition and innovation, offering undergraduate and postgraduate programmes across 24 schools and three faculties: arts, humanities, and social sciences; engineering, mathematics and science; and health sciences.

Spread across 47 acres in Dublin's city centre, Trinity has a 17,000-strong student body, 3,000 staff and over 107,000 alumni around the world. Of the student body, 16% come from outside Ireland and, of those, 40% are from outside the European Union, making Trinity's campus cosmopolitan and bustling, with a focus on diversity.

Trinity has developed significant strength in a broad range of research areas, including the 19 broadly based



multi-disciplinary thematic research areas. Trinity is home to Ireland's first purpose-built nanoscience research institute, CRANN, housing 150 scientists, technicians and graduate students in specialised laboratory facilities. Meanwhile, the state-of-the-art Trinity Biomedical Sciences Institute is carrying out breakthrough research in areas such as immunology, cancer and medical devices. Trinity College Institute of Neuroscience (TCIN) leads brain research in Ireland and is the country's only dedicated neuroscience research institute. TCIN is an interdisciplinary research institute with Principal Investigators from

a wide range of disciplines including psychology, physiology, biochemistry, engineering, psychiatry and genetics.

The Library in Trinity is the largest research library in Ireland, with a collection of six million printed items, 500,000 maps, 80,000 electronic journals, and 350,000 electronic books. Some of the world's most famous scholars are graduates of Trinity, including writer Jonathan Swift, dramatist Oscar Wilde, philosopher George Berkeley, and political philosopher theorist Edmund Burke. Three Trinity graduates have become Presidents of Ireland - Douglas Hyde, Mary Robinson and Mary McAleese.



Trinity's Global Rankings

Trinity is:

- » Recognised internationally as Ireland's leading university in the QS World University Ranking, the THE World University Ranking and the Academic Ranking of World Universities (Shanghai).
- » Ranked 78th in the world and 27th in Europe by the QS World University Rankings 2015.
- » Ranked in the top 70 universities in the world in the Times Higher Education Ranking of World Universities 2015 in terms of overall research and in the top 75 universities in the world in terms of citations (research impact).
- » Ranked in the top 1% of research institutions in the world in 17 fields - an increase of over 150% from 2004 (Thomson Reuters Essential Science Indicators, September November 2015).
- » Ranked in the world's top 10% universities in terms of International Outlook (Times Higher Education World University Ranking, 2015).
- » Ranked in the top 200 world universities in 25 of the 28 disciplines in which it was evaluated in the 2015 QS World University Rankings by subject including:
 - In the top 50 universities in the world in 5 subjects, one of which is Biological Sciences (at 48th).

- In the top 100 universities in the world in a further 14 subjects, including Medicine, Computer Science and Information Systems and Pharmacy and Pharmacology.

Research at Trinity

Trinity's research leverages areas of multidisciplinary expertise where the University has critical mass of world-class primary investigation. Trinity's research is across science, engineering, social sciences, medicine and the arts. These research areas address immediate and long-term challenges in society, as well as offering opportunities for economic development.

Research is central to the generation of the new disruptive ideas that will underpin future sustainable businesses. The value created by Trinity is critical for Ireland's economic and social development, as well as society globally.

Trinity's research themes are supported by a set of research institutes that provide the infrastructure needed to support multi-disciplinary research as well as engagement with enterprise and social partners working in partnership with Trinity's 24 schools. Built on the foundations of individual excellence, clustering expertise into multi-disciplinary teams, Trinity has a portfolio of research activity presented as 19 themes www.tcd.ie/research/themes, which have scale, resources and the ability to solve large scale research challenges.

Trinity's credentials in research and innovation are strong:

- » According to Thomson Reuters Essential Science Indicators, in terms of research impact as measured by citations, Trinity ranks among the world's top 1% of research institutions in 17 STEM and social sciences fields, including immunology, materials science, and molecular biology and genetics.
- » Trinity's researchers have made major contributions to global society. Trinity's mathematics gave us quaternions which underpin modern spaceflight while our chemists developed the world's first commercial nicotine patch, in collaboration with Elan Pharmaceuticals.
- » Trinity has an outstanding record of publications in high-quality journals and in terms of the impact of its research publications.
- » Research expenditure rose by 10% to €87m in 2013/14 reflecting the university's success in securing new awards over the past number of years, in particular from SFI and the EU. The value of new awards entered into in the year 2013/14 amounted to €67m, bringing the total value of the Research Portfolio to over €480m.
- » In the period 2010 to 2015, 102 licences have been granted to industry, Trinity has received 314 disclosures of novel inventions, and 36 new

Trinity campus companies have been formed to commercialize Trinity's intellectual property.

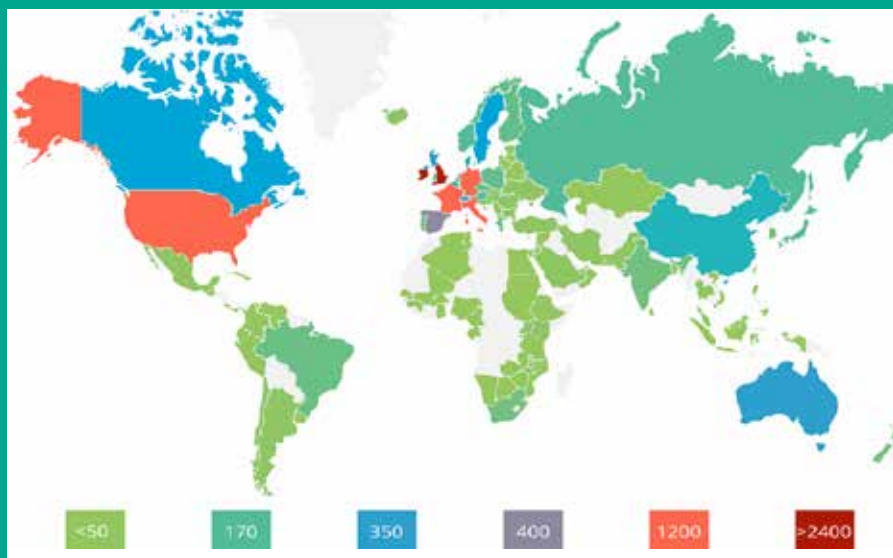
- » In 2008, Trinity created Science Gallery on our Dublin campus, attracting over 1.5 million people to unique exhibitions, from living art experiments to materials science and from the future of the human race to the future of play.
- » The Trinity Biomedical Sciences Institute (TBSI) opened in 2011. Among the key highlights so far are:
 - 76 companies working with researchers to develop new products in biomedicine;
 - €36 million raised for interdisciplinary research; and,
 - Three spin-out companies involved in drug discovery and development, and cancer treatment - Opsona Therapeutics, Trino Therapeutics and TriMod.
- » Trinity is partnering with the University of California, San Francisco to establish the Global Brain Health Institute (GBHI), which was funded by a €165m gift from Atlantic Philanthropies to address the problem of dementia and ageing related neuro degeneration. GBHI will train the next generation of ageing specialists from around the world and position Trinity as a global leader in ageing and dementia research.
- » Trinity also has a growing presence in telecommunication and software research. The CONNECT telecommunications centre addresses network and spectrum optimization while ADAPT specializes in software customization.

Trinity's Flagship Research Institutes

Trinity's research institutes provide the infrastructure to support multi-disciplinary research, working in partnership with Trinity's faculties and schools www.tcd.ie/research/institutes



Trinity's International Research collaborations



Full details of Trinity's research and innovation strategies as well as international research collaborations are available at:
www.tcd.ie/research www.tcd.ie/innovation
www.tcd.ie/research/worldleaders/brochure2014

Research in Ireland

Ireland is a country of 4.5 million people with a global diaspora of 70 million more, which has a significant impact on global affairs in terms of culture, business and research. Over the last decade, Ireland has demonstrated a clear commitment to the development of a knowledge-led economy, in good times and bad, with unprecedented investment on a national level in education, science and technology.



This strategy is based on harnessing its unique international success in attracting foreign direct investment, and ensuring that Ireland remains not just a global hub for manufacturing but also increasingly for research, development and innovation.

Ireland has proven to be the most effective gateway for international businesses into Europe. This small offshore island has successfully become a global economic centre with a truly remarkable cluster of world-leading businesses.

- » Nine of the top ten global companies in medical technologies have a high volume manufacturing base here and a growing presence in Research and Development.
- » Nine of the top ten global pharmaceutical companies are located in Ireland, with seven out of ten pharmaceutical blockbusters produced here.
- » The ICT sector in Ireland attracts global investment with seven of the world's top ten companies operating here. The sector accounts for €50 billion in Irish exports and is continuing to grow.
- » Ireland has in recent years become the internet hub for Europe with companies such as Google, Facebook, AOL, PayPal and a host of gaming companies picking Ireland as their European location.

Ireland is a leading location for business and innovation. The country is among the most competitive and successful in attracting foreign direct investment – both from companies which already are established here and new businesses. Indeed Ireland is now using its growing status as a knowledge-based economy to open new doors and avenues for investors. The sharp increase in new Research Development & Innovation (RD&I) projects is proof of success and international confidence in Ireland.

Advantages include:

- » A politically stable country and respected regulatory regime.
- » A thriving RD&I sector, with strong Government support for productive collaboration between industry and academia.
- » A strong legal framework for development, exploitation and protection of Intellectual Property rights.
- » Strategic location with easy access to the Europe/ Middle East region.
- » Excellent IT skills and infrastructure.
- » Good telecommunications infrastructure, with state-of-the-art optical networks and international connectivity.

- » Strategic clusters of leading global companies in Life Sciences, ICT, Engineering, Services, Digital Media, and Consumer Brands.
- » An established reputation as a hub for business process improvement in the region

Ireland's growing international reputation for research excellence is primarily due to research funded by Science Foundation Ireland (www.sfi.ie). SFI has invested over €1,400 million in research at Irish universities over the last decade. This investment, guided solely by international peer review and research excellence, has taken the form of both individual PIs awards and the development of ten Centres for Science, Engineering and Technology. The research investment has led to significant improvements in the quantity and quality of the published output.

Ireland is now ranked in the top 20 countries globally in scientific global rankings and ranks 3rd for immunology and 8th for material science. (Source: Thomson Reuters Essential Science Indicators) The investment has also transformed the competitiveness of Irish universities such as Trinity College Dublin, Ireland's leading university.

Did you know? Ireland is...

- » Forbes' Best Country for Business 2013
- » First in Europe for completion of higher education. 60% of students go on to higher education.
- » Ranked ninth overall (out of 141 countries) in the Global Innovation Index 2012 (Insead).
- » Highlighted as one of five up and coming countries in the world to watch for scientific research excellence (Nature)
- » In the top 15 countries in scientific global ranking for international scientific citation per paper and higher in specific disciplines
 - First in Immunology
 - Second in Computer Science
 - Second in Microbiology
 - Second in Nanoscience and Nanotechnology
 - Third in Neurosciences and Behaviour
 - Fifth in Materials Science
 - Seventh in Pharmacology and Toxicology
 - Ninth in Molecular Biology and Genetics
- » Ireland has a rich history of achievements in Science and Technology and continues to invest in its research and technology capabilities:
 - Robert Boyle – founder of modern chemistry
 - Ernest Walton – split the atom with John Cockcroft
 - Sir William Rowan Hamilton – modern maths and gaming
 - Sir Charles Parsons – engineer
 - Sir Francis Beaufort – devised the Beaufort wind force scale.

Dublin is.....

Ranked as the best city in the world for human capital (Economic Intelligence Unit).

Ranked in 34th position (alongside Boston) and is the highest ranking city across the UK and Ireland in the 2015 Mercer Quality of Living rankings.

Popularly renowned as one of Europe's leading cities for quality of living, tourism and entertainment.

Home to a vibrant tech and startup scene and is the European headquarters for companies such as Google, Facebook, Twitter, IBM, and Microsoft.

Indeed, many of Dublin's best cultural, historical and entertainment centres are within easy walking distance of Trinity's gates.





Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

<https://www.tcd.ie/ussher>

<https://jobs.tcd.ie>