Post Summary

The ADAPT Centre, the centre for digital content technology, is seeking to appoint a Postdoctoral Research Fellow to conduct research in the areas of computer vision and video processing.

The candidate will be working with leading industry partners on Deep Learning projects in video manipulation/enhancement/object insertion.

This is a unique opportunity to join a research group which has pioneered video and audio technologies now used everyday in movie production and by companies such as YouTube and Google. We even have an OSCAR winner in our team!

Background on the ADAPT Centre

We live in a world of global digital connectivity where individuals, communities and businesses are communicating globally at incredible speed, in enormous volumes, across the world’s languages and over an ever-increasing range of devices. ADAPT’s vision is to leverage this torrent of digital content to
enable unprecedented levels of global engagement among people, companies and communities. This is achieved through a unique collaboration between world-class research groups in multilingual natural language processing (NLP), multimedia content analysis and transformation, personalisation and multimodal interaction. Within ADAPT and its affiliated group of international and commercialisation projects, these posts will deliver the advances in linked data and semantic technologies that are key to efficiently manage the content, language and knowledge assets that underpin intelligent global customer engagement.

Sigmedia

The Sigmedia Group is based in the School of Engineering at Trinity College Dublin. The research group has a world-class reputation in digital signal processing for media applications. Major areas of expertise include human speech communication, image and video processing, post-production and restoration in digital cinema. Please visit www.sigmedia.tv for more information.

Why join ADAPT @ TCD

- Work on hard problems in an interdisciplinary and exciting research environment. The ADAPT Centre combines expertise of researchers at Trinity College Dublin, Dublin City University, University College Dublin, and Technological University Dublin. It brings together more than 150 researchers that have collectively won more than €100M in competitive research funding and have an international track record of bridging research and innovations to more than 140 companies. With €50M in new research funding from SFI and industry, ADAPT research and technologies will help businesses in all sectors to manage, personalise and deliver digital content more effectively.

- Work in a University where excellence of research is valued. Trinity is Ireland’s premier University and is ranked in 71st position in the top 100 world universities by the QS World University Rankings 2014.

- Work in a centre focussed on advancing your career. Whether you want to take an academic, industrial, or entrepreneurial career path, ADAPT prides itself in the support and mentoring that enables all its postdocs to reach their full potential. This year alone ADAPT’s postdoc-to-PI programme has helped three postdocs transition to be Principal Investigators on their own H2020 projects, while four others have recently won funding with ADAPT support to realise the commercialisation of their research through spin outs and licensing.

Standard duties and Responsibilities of the Post

Reporting to his/her Principal Investigator the Researcher will:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator (PI).
- Support the PI and research group in the design, development and implementation of the research programme.
- Conduct research in the area of video enhancement (video denoising and super resolution) or video manipulation for seamless removal and insertion of objects in scenes.
- Substantially contribute to the identification of external funding sources and assist in the writing of grant proposals.
• Mentor, assist and supervise postgraduate research students as required.
• Assist the PI in the management/coordination of key aspects of the research programme (e.g. financial management, reporting, equipment management, etc.).
• Engage in the dissemination of the results of the research in which he/she is engaged to the wider research community with the support and under the supervision of the Principal Investigator.
• Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
• Engage with internal and external stakeholders including academic and industry partners/collaborators as appropriate.
• Carry out administrative work associated with the programme as necessary.
• Engage with internal and external stakeholders including academic and industry partners/collaborators as appropriate.
• Participate in ADAPT Centre activities, such as industry showcases and annual reviews.
• Report on progress at meetings and in writing to ADAPT Centre Management.
• Produce top-quality journal and conference publications, in collaboration with the Principal Investigator (PI).

Funding Information

The position is funded through the Science Foundation Ireland (SFI) ADAPT Research Centre.

Person Specification

Qualifications

The candidates must have a PhD (essential) and a research record in computer vision, with publications in the main conferences/journals (CVPR, ICCV, ECCV, PAMI, IJCV, ICIP, TIP, etc) (essential) and proficient programming skills in C/C++ (essential).

Reporting to a Principal Investigator, the successful candidate will work within a large group of Postdoctoral Researchers, PhD students and Software Developers, within the Sigmedia Group of Trinity College Dublin and within the wider ADAPT research community.

Knowledge & Experience (Essential & Desirable)

Essential

• A strong record of international peer-reviewed publication and presentation in top-tier conferences (CVPR, ICCV, ECCV, PAMI, IJCV, ICIP, TIP, etc)
• Excellent programming skills in C/C++
• Participation in writing of grant applications
• Mentoring of research students
• Excellent written and oral proficiency in English
• Strong communication and interpersonal skills, both written and verbal
• Desire to learn about new products, technologies and keep abreast of new products and technical and research developments

Desirable (i.e. the following would be advantageous)

• Experience of high-performance computing facilities
• Exposure to commercialisation of research
Further Information for Candidates

<table>
<thead>
<tr>
<th>URL Link to Research Group</th>
<th><a href="https://www.adaptcentre.ie/">https://www.adaptcentre.ie/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>URL Link to School</td>
<td><a href="http://www.tcd.ie/Engineering/">http://www.tcd.ie/Engineering/</a></td>
</tr>
<tr>
<td>URL Link to Research Group</td>
<td><a href="https://www.adaptcentre.ie/">https://www.adaptcentre.ie/</a></td>
</tr>
<tr>
<td>URL Link to Human Resources</td>
<td><a href="http://www.tcd.ie/hr/">http://www.tcd.ie/hr/</a></td>
</tr>
</tbody>
</table>

The School of Engineering

The School at Trinity College was formed in 1841 and is one of the oldest in Engineering in the English speaking world. The Strategic Mission of the School of Engineering is the pursuit of excellence in teaching and research in Engineering with the central aim of producing graduate engineers with a capacity for independent thought in problem-solving and creative analysis and design. The School consists of the following three Disciplines:

- Civil, Structural and Environmental Engineering;
- Electronic and Electrical Engineering;
- Mechanical and Manufacturing Engineering.

At present, the School has 62 academic staff, 48 research fellows, 18 adjunct academic staff, 41 technical/support staff, 168 research students, 68 taught masters students, 135 diploma students and 847 undergraduates (including nearly 100 MAI students) spread over seven different sites on campus. With a total annual School budget of around €20M, the research income accounts for just over €8M. The School is the most successful Engineering School in the country as is recognized by its QS ranking in the world’s top 100 of Engineering and Technology Faculties. At undergraduate level, the School runs two degree courses, the B.A.I. (Baccalaureatus in Arte Ingeniaria) and the B.Sc. (Ing) in Engineering with Management, both leading to the M.A.I. degree following successful completion of a fifth year. Graduating students obtain employment in a very wide sector, from Engineering in all its forms to finance and business.

Trinity College Dublin, the University of Dublin

Trinity is Ireland’s premier university, with a proud tradition of excellence stretching back to its foundation in 1592. The oldest university in Ireland, and one of the oldest in Europe, today Trinity sits at the intersection of the past and the future, and is ideally positioned as a major university in the European Union. Our 47-acre campus is located in the heart of Dublin city centre and is home to historic buildings dating from the University’s establishment, as well as some of the most cutting-edge teaching and research facilities in Ireland. Students at Trinity benefit from a unique educational experience across a range of disciplines in our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences. The pursuit of excellence through research and
scholarship is at the heart of a Trinity education, and our researchers have an outstanding publication record and strong record of grant success.

Trinity has developed 18 broad-based multidisciplinary research themes that cut across disciplines and facilitate world-leading research and collaboration within the University and with colleagues around the world. These internationally recognised themes include such diverse areas as Cancer, Immunology, Telecoms, Identities in Transformation, Nanoscience, Neuroscience, and Making Ireland. Researchers from across the University work together in innovative ways to develop new and exciting approaches to their research and explore the frontiers of knowledge in the 21st century. In creating these dedicated research themes, Trinity’s researchers are able to become a more powerful force on the global stage, successfully competing for large-scale grants and attracting top students and faculty to the University. Trinity is home to Ireland’s first purpose-built Nanoscience research institute, CRANN, which opened in January 2008. This state-of-the-art facility houses 150 scientists, technicians, and graduate students in specialised laboratories, fostering creative innovations that have seen Trinity’s researchers make significant breakthroughs.

The Trinity Long Room Hub for Arts and Humanities Research Institute is the University’s flagship institute for research in the Arts and Humanities, providing a world-class environment for cross-disciplinary collaborative projects. The Long Room Hub provides a central location through which the University’s internationally respected Arts and Humanities research can become more visible, demonstrating its relevance for contemporary and future societies. Researchers from across the University regularly participate in debates on topical issues facing the world today. As well as operating an International Visiting Research Fellowship programme, the Long Room Hub also hosts major EU-funded Digital Humanities projects.

One of the most instantly recognised parts of Trinity’s campus is the famous Old Library, home to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps, and early printed material. Trinity’s Library is the largest research library in Ireland and is an invaluable resource to Trinity’s students and research community. Built up over the four centuries of the University’s existence, the Library’s collections have benefitted from its status as a Legal Deposit library for the past 200 years, granting Trinity the right to claim a copy of every book published in Ireland and the UK. At present, the Library’s holdings span approximately 4.25 million books, 22,000 printed periodical titles, and access to 60,000 e-journals and 250,000 e-books.
Trinity attracts top students from Ireland and abroad and prides itself on the consistently high standard of student admitted to the University every year. These students are drawn to Trinity for the excellence of our research-led teaching and for the quality and prestige a degree from this University confers. Trinity has also pioneered accessibility to education in Ireland, becoming the first university in the country to reserve 15% of its undergraduate places for students from non-traditional learning groups. Trinity is the top-ranked European university for student entrepreneurship and Europe’s only representative in the world’s top-50 universities.

Our alumni have gone on to shape the history of Ireland and of Western Europe in a wide range of fields. These include such notable figures as Jonathan Swift, Oscar Wilde, William Rowan Hamilton, Edmund Burke, William Stokes, Denis Burkitt, Louise Richardson, Lenny Abrahamson, and Anne Enright. Three of Trinity’s graduates have been awarded Nobel prizes: Ernest Walton for Physics in 1951; Samuel Beckett for Literature in 1968; and William Campbell for Physiology / Medicine in 2015. Trinity also counts the first female President of Ireland among its alumni in Mary Robinson, as well as other notable former Presidents Douglas Hyde and Mary McAleese. At Trinity we are justifiably proud of our tradition, and we strive to uphold this excellence as we face the demands of the 21st century.

Ranking Facts
Trinity is the top ranked university in Ireland. Using the QS methodology, the University is ranked 104th in the world and using the Times Higher Education World University Rankings methodology Trinity is 117th in the world.

**Overall**

- Trinity is Ireland’s No.1 University in the QS World University Ranking, THE World University Ranking and the Academic Ranking of World Universities (Shanghai).
- Trinity is ranked 104th in the World, and 36th in Europe, in the 2018/2019 QS World University Ranking.
- Trinity is ranked in the Top 120 for Graduate Employability in the QS 2018 Rankings.
- Trinity is in the Top 50 most innovative universities in Europe according to Reuters.¹
- Between 2010 and 2015, Trinity was ranked the top university in Europe for entrepreneurship according to Pitchbook’s independent analysis.²

**Internationalisation**

¹ [http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT](http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT)
Trinity is ranked 52nd in the world in the THE World University Ranking for international outlook.

**Research Performance**

- Of the 981 institutions included in the THE World University Rankings for 2017, Trinity is in the top 15% internationally for research performance.
- Trinity is ranked in the top 15% internationally by QS for citations.

**In the QS World University Subject Rankings:**

- Trinity is ranked in the top 50 worldwide in four subject areas according to the QS World University Subject Rankings 2018. The University is ranked in the top 100 globally for 20 subjects overall.
- Trinity’s Top 50 subjects include Nursing (25th), Classics (28th), English (28th) and Politics (43rd).
- Trinity is ranked in the top 100 for each of the following 16 subjects: History, Languages, Philosophy, Theology, Computer Science, Biology, Medicine, Pharmacy, Chemistry, Geography, Materials Science, Education, Law, Social Policy, Sociology and Sport.
- The University is ranked in the top 100 for three broad subject areas: Arts & Humanities (57th), Life Sciences & Medicine (87th), and Engineering & Technology (89th).

**Research Themes**
The Selection Process in Trinity

The Selection Committee (Interview Panel) may include members of the Academic and Administrative community together with External Assessor(s) who are expert in the area. Applications will be acknowledged by email. If you do not receive confirmation of receipt within 1 day of submitting your application online, please contact the named Recruitment Partner on the job specification 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, the University 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. The University’s selection methods may consist of any or all of the following: Interviews, Presentations, Psychometric Testing, References and Situational Exercises.

It is the policy of the University to conduct pre-employment medical screening/full pre-employment medicals. Information supplied by candidates in their application (Cover Letter and CV) will be used to shortlist for interview.

Applications from non-EEA citizens are welcomed. However, eligibility is determined by the Department of Jobs, Enterprise and Innovation and further information on the Highly Skills Eligible Occupations List is set out in Schedule 3 of the Regulations https://www.djei.ie/en/What-We-Do/Jobs-Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Highly-Skilled-Eligible-Ocupations-List/ and the Ineligible Categories of Employment are set out in Schedule 4 of the Regulations https://www.djei.ie/en/What-We-Do/Jobs-Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Ineligible-Categories-of-Employment/. 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 an employment permit.
Equal Opportunities Policy

Trinity is an equal opportunities employer and is committed to 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. On that basis we encourage and welcome talented people from all backgrounds to join our staff community. Trinity’s Diversity Statement can be viewed in full at https://www.tcd.ie/diversity-inclusion/diversity-statement.

Pension

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.
Application Procedure

Candidates should submit a cover letter (1xA4 page maximum) explaining why you are suitable for the position together with a full curriculum vitae including the names and contact details of 3 referees (email addresses required) to:

monica.lechea@adaptcentre.ie