## Post Specification

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<th><strong>Post Title:</strong></th>
<th>Research Fellow (Post-Doctoral) in computer vision and image processing applications.</th>
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<td><strong>Post Status:</strong></td>
<td>24 months Fixed-term Contract. Full-time.</td>
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<td><strong>Research Group / Department / School</strong></td>
<td>ADAPT Centre, Centre for Digital Content Technology, School of Computer Science and Statistics, Trinity College Dublin, the University of Dublin.</td>
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| **Location:** | Graphics Vision Visualisation group (GV2)  
Stack B, CHQ  
Trinity College Dublin, the University of Dublin. |
| **Reports to:** | Principal Investigator: Dr. Rozenn Dahyot |
| **Salary:** | Appointment will be made on the IUA Postdoctorate Research Fellow Level 2 Salary scale (range €36,854 to €47,728) at a point in line with Government Pay Policy |
| **Closing Date:** | 12 Noon (Irish Standard Mean Time), March 16th. |
Post Summary

The ADAPT Centre, the centre for digital content technology, seeks to appoint a Postdoctoral Research Fellow to conduct research in the area of computer vision and image processing in our Industry facing research team ‘Spokes’. We require a highly motivated researcher to join the team in Trinity College Dublin in the school of Computer Science and Statistics to work in collaboration with industry in an exciting programme of applied research. The candidate should have a mature personal research plan in at least one of the relevant following areas: object detection, recognition and segmentation in image data (e.g. images, image sequences, multiple view images and multiple view image sequences).

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;
- Research solutions to problems in a number of areas of interest, including:
  - Machine and deep learning
  - 3D point cloud and image processing
  - Pattern detection, recognition and geolocation;
- 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 / co-ordination 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;
• 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 & the ADAPT Centre.

Qualifications
Candidates must have a PhD in computer science, statistics or related fields with 4 to 10 years research experience (including PhD studies).

Knowledge & Experience (Essential)
• Research experience in machine and deep learning for image processing and computer vision or similar areas including 3D point cloud, pattern detection, recognition and geo-location.
• Publications in the top conferences (e.g. ICML, CVPR, ICCV) and/or journals (e.g. IEEE Trans. Image Processing, Pattern Analysis and Machine Intelligence, International Journal on Computer Vision).
• A pro-active attitude and ability to work both independently and in collaboration with the PI research group.
• Excellent programming skills (e.g. C++, python) with experience using deep learning libraries (e.g. caffe, torch, theano etc.)
• Excellent communication skills.

Desirable Experience
• Collaboration with Industry. Commercialisation of Research.
Further Information for Candidates

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Background on ADAPT

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.

GV2

The Graphics Vision and Visualisation group (GV2) http://gv2.scss.tcd.ie at Trinity College Dublin (TCD) is an internationally active research group dedicated to carrying out innovative research in computer graphics, computer vision and all aspects of visual computing. GV2 was formed in 2006 with the integration of two longstanding TCD research groups: the Image Synthesis Group [ISG], established in 1993, and the Computer Vision and Robotics Group [CVRG], which was established 1983. Our main areas of research include:

- Image, Video and Audio Processing & Analysis
- Perception & Graphics
- Real-time Rendering & Animation
- Custom and Multi-core Hardware Architectures
- Computer Vision & Augmented Reality
Why join ADAPT@ TCD

As a Spokes research fellow you will 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 Dublin Institute of Technology. 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.

- You will 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.
- The ADAPT centre is focussed on advancing the careers of all our researchers. 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 its postdoc-to-PI programme has helped three postdocs transition to be Principal Investigators on their own H2020 projects, while four other have recently won funding with ADAPT support to realise the commercialisation of their research through spin outs and licensing.

The School of Computer Science and Statistics

The School of Computer Science and Statistics (SCSS) comprising the five disciplines of Computer Systems, Information Systems, Intelligent Systems, Software Systems and Statistics was established in July 2005 from an exciting amalgamation of two long-established departments: Computer Science and Statistics. Synergies in areas such as digital content, telecommunications, computer vision and ubiquitous computing, combined with cutting edge statistical learning research has provided a rare environment in which today members of SCSS exploit the emergence of data and its analysis as a driver in many fields of computer science and statistics.

Comprising 68 academics and over 100 research staff, the School is internationally recognized for the quality of its research and teaching and is ranked in the top 100 Computer Science Schools worldwide as well as the highest ranked in Ireland.
The School hosts two Science Foundation Ireland (SFI) Research Centres: ADAPT and CONNECT, and is a partner in a further two: LERO and INSIGHT. Four of TCD’s multidisciplinary research themes, namely Creative Technologies, Digital Humanities, Intelligent Content & Communications, and Smart Sustainable Cities are led by members of SCSS. The School currently coordinates six European Commission projects and is partner in a further seven. The School signed research contracts of approximately €54 million over the last three years from a range of national and international agencies such as SFI, Enterprise Ireland as well as the European Commission’s Seventh and Horizon 2020 Framework Programmes.

The School offers a wide range of undergraduate and postgraduate degree programmes on which approximately 1,200 students are registered per year. In addition, the School offers opportunities for higher degrees by research and there are currently over 150 registered PhD students in the School.

**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 19 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.

**Ranking Facts**

Trinity is the top ranked university in Ireland. Using the QS methodology we are ranked 88th in the world and using the Times Higher Education World University Rankings methodology we are 131st in the world.

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**World University Rankings Update (April 2017)**

**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 88th in the World, and 29th in Europe, in the 2017/2018 QS World University Ranking.
- Trinity is ranked in the Top 100 for Graduate Employability in the QS 2017 Rankings.
- Trinity is in the Top 50 most innovative universities in Europe according to Reuters.¹

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¹ [http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0ZO0CT](http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0ZO0CT)
• Between 2010 and 2015, Trinity was ranked the top university in Europe for entrepreneurship according to Pitchbook’s independent analysis.²

**Internationalisation**

• 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 Rankings:**

• Trinity featured in the world’s elite (Top 200) institutions in 25 of the 28 subjects in which it was evaluated by the QS World University Rankings by Subject in 2015. Of these, Trinity ranked in the top 100 in the world in 14 subjects and in the top 50 in the world in 6 subjects: English Language and Literature; Nursing; Politics and International Studies; History; Biological Sciences; and Modern Languages.

• In three out of the last four years, Trinity has been consistently ranked in the Top 50 worldwide for the following areas: English Language and Literature; Nursing; Modern Languages; and Politics and International Studies.

• In the QS Faculty rankings, Trinity has been consistently ranked in the Top 100 globally for Arts and Humanities over the last four years.

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-Occupations-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 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.

Application Procedure

Candidates should submit a cover letter together with a full curriculum vitae to include the names and contact details of 3 referees (email addresses if possible) to:

Name: Jenny Walsh

Email: jenny.walsh@adaptcentre.ie

Contact Telephone Number: +353 1 896 1797

Please include the job reference ADAPT-IP2018 in the subject heading.

TRINITY COLLEGE IS AN EQUAL OPPORTUNITIES EMPLOYER