



Post Specification

Post Title:	Research Fellow in Data Engineering
Post Status:	Specific Purpose 2-year contract
Department/School:	Trinity Health Kidney Centre, School of Medicine
Location:	ADAPT SFI Centre
Reports to:	Principal Investigators - Professors Mark Little and Declan O'Sullivan
Salary:	This appointment will be made on the SFI Level 2 Research Fellow salary scale (€38,632 - €44,657) on a point commensurate with experience
Closing Date and Time:	6 July 2021 at 5pm

Post Summary

Applications are invited for a research fellow with specific knowledge engineering and data modelling skills to work on a collaborative project between the Trinity Health Kidney Centre (www.thkc.ie), the School of Computer Science and Statistics (<https://www.scss.tcd.ie/>) and the ADAPT research centre (www.adaptcentre.ie). This highly innovative project seeks to improve healthcare in the field of autoimmune disease by linking medical, statistical and healthcare information. The post-holder will be experienced in curation of unstructured data and use of resource description framework (RDF) modelling.

Background to the Post

The successful candidate will work with Professors Mark Little (www.tcd.ie/medicine/thkc/research/chronic.php), Declan O'Sullivan (<https://www.tcd.ie/research/profiles/?profile=osulldps>) and Lucy Hederman (<https://www.scss.tcd.ie/Lucy.Hederman/>). The project builds on prior work in the AVERT programme (<https://www.tcd.ie/medicine/thkc/avert/>) with the primary



objective of building and maintaining a semantic web-based health research data integration engine. The proposed project leverages an extensive rare disease registry and biobank (www.tcd.ie/medicine/thkc/research/rare.php) to generate a longitudinal granular phenotype which we aim to link to biomarker, environmental and wearable device data streams.

Standard duties and responsibilities

The Research Fellow will:

- Be responsible for the research and implementation of technical solutions to the project goals, in particular development and maintenance of RDF triplestore and query interface.
- Produce top-quality journal and conference publications, in collaboration with other project members.
- Identify and write proposals for additional research funding.
- Participate in project activities, e.g. meetings, reviews and demonstrations.
- Provide support and advice to collaborators and partners.
- Contribute to teaching and supervision in the ADAPT Centre.
- Engage in the dissemination of the results of the research.
- Engage in appropriate training and development opportunities as required by the project, the School or Research Centre, or the University.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators.
- Carry out administrative work associated with the research as necessary.

Person Specification

Qualifications

- PhD or equivalent in computer science or aligned field



Knowledge & Experience

- Excellent Semantic Web, Linked Data and Knowledge Graph experience
- Database management skills: NoSQL, Graphing Databases, SQL
- Excellent knowledge of one or more of: Java, PHP, node.js
- Excellent knowledge of scripting languages: Python, PHP, Bash, Perl, JavaScript, d3.js
- Experience with data wrangling, data analysis, data engineering would be a distinct advantage
- Knowledge of web application development and security

Benefits

- Competitive salary
- Computer and peripherals of your choice
- A fast-paced environment with impactful work
- Pension
- Day Nursery
- Travel Pass Scheme
- Bike to Work Scheme
- Employee Assistance Programme
- Sports Facilities
- 22 days of Annual Leave
- Paid Sick Leave
- Training & Development
- Staff Discounts



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) via the following link:

<https://forms.gle/nW3RN4A5nP1eD1vr9>

**TRINITY COLLEGE DUBLIN, THE UNIVERSITY OF DUBLIN IS AN EQUAL
OPPORTUNITIES EMPLOYER**

Background on the ADAPT Centre

ADAPT, the world leading SFI Research Centre for Digital Media Technology, brings together leading academics, researchers and industry partners to deliver excellent science and impact, engage the public, innovate novel solutions for business and enhance Ireland's international reputation (www.adaptcentre.ie). ADAPT combines the expertise of over 300 researchers across eight Higher-Education Institutes (Trinity College Dublin, Dublin City University, University College Dublin, Technological University Dublin, Cork Institute of Technology, Athlone Institute of Technology, Maynooth University and National University of Ireland, Galway) with that of its industry partners to produce ground-breaking digital content innovations.

The ADAPT Centre executive function is co-hosted between Trinity College Dublin and Dublin City University. ADAPT brings together more than 300 researchers who collectively have won more than €100m in funding and have a strong track record of transferring world-leading research and innovations to more than 140 companies. ADAPT partners are successfully advancing the frontiers of Artificial Intelligence (AI), content analysis, machine translation, personalisation, e-learning/education, media technologies, virtual and augmented reality, and spoken interaction, as well as driving global standards in content technologies.

Today's world is increasingly being driven globally by digital content technology which enables us to create, transform and consume information at ever increasing



speeds across multiple modalities and devices. ADAPT's overall mission is to 'empower people for a deeper engagement in a digital world'. The ADAPT research programme drives breakthroughs within and across the intersection of AI driven media technologies and their empowerment of individuals, enterprises and society. This post will deliver advances in linked data and semantic technologies that are key to efficiently manage the content, language and knowledge assets that underpin intelligent global engagement.

Why join ADAPT @ TCD?

- Work on hard problems in an interdisciplinary and exciting research environment. The ADAPT Centre combines the expertise of more than 220 researchers across eight universities at Trinity College Dublin, Dublin City University, University College Dublin, TU Dublin, National University Galway, Athlone Institute of Technology and Cork Institute of Technology. As well as conducting core research we have an active industry engagement programme and working on exciting and successful applied research projects with some of the world's leading brands.
- Work in a University where excellence of research is valued. Trinity is Ireland's No. 1 University and is ranked in 101st position in world universities rankings (QS World University Ranking, 2020/21).
- Work in a centre focused 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 research fellows to reach their full potential. In 2020 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.



Trinity Health Kidney Centre Summary

This translational research centre (www.thkc.ie) is based across several sites in Dublin: Tallaght hospital (where most patients with kidney disease in South Dublin are cared for), Beaumont Hospital (the largest kidney unit in Ireland and site of the national renal transplant programme), St James’ Hospital (the largest hospital in Ireland and currently the only one with a comprehensive electronic health record), the ADAPT SFI Centre and the Trinity Translational Medicine Institute (<https://www.tcd.ie/ttmi/research/themes/translational-III.php>).

Information relating to the School of Medicine is available via the following link <http://www.medicine.tcd.ie/>

Current Research Fields

- Investigation of the influence of environment on disease relapse in autoimmunity
- Development of a pan-Ireland registry of systemic vasculitis, with linked bio-resource which provides clinical research samples for study in the laboratory
- Development of urinary biomarkers of renal inflammation
- Investigation of adverse events of intensive immunosuppression

Further Information for Candidates

URL Link to School	http://www.medicine.tcd.ie/ https://www.scss.tcd.ie/ https://www.adaptcentre.ie
URL Link to Research Group	https://www.tcd.ie/medicine/thkc/research/chronic.php
URL Link to Human Resources	http://www.tcd.ie/hr/



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin





Trinity College Dublin, the University of Dublin

Trinity is Ireland's leading university and is ranked 108th in the world (QS World University Rankings 2020). Founded in 1592, the University is steeped in history with a reputation for excellence in education, research and innovation.

Located on an iconic campus in the heart of Dublin's city centre, Trinity has 18,000 undergraduate and postgraduate students across our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences.

Trinity is ranked as the 17th most international university in the world (Times Higher Education Rankings 2020) and has students and staff from over 120 countries.

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. Trinity is also home to 5 leading flagship research institutes:

- Trinity Biomedical Sciences Institute (TBSI)
- Trinity College Institute of Neuroscience (TCIN)
- Trinity Translational Medical Institute (TTMI)
- Trinity Long Room Hub Arts and Humanities Research Institute (TLRH)
- Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN)

Trinity is the top-ranked European university for producing entrepreneurs for the past five successive years and Europe's only representative in the world's top-50 universities



(Pitchbook Universities Report).

Trinity is home to the famous Old Library and to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps and early printed material. The Trinity Library is a legal deposit library, granting the University the right to claim a copy of every book published in Ireland and the UK. At present, the Library's holdings span approximately 6.5 million printed items, 400,000 e-books and 150,000 e-journals.

With over 120,000 alumni, Trinity's tradition of independent intellectual inquiry has produced some of the world's finest, most original minds including the writers Oscar Wilde and Samuel Beckett (Nobel laureates), the mathematician William Rowan Hamilton and the physicist Ernest Walton (Nobel laureate), the political thinker Edmund Burke, and the former President of Ireland Mary Robinson. This tradition finds expression today in a campus culture of scholarship, innovation, creativity, entrepreneurship and dedication to societal reform.

Rankings

Trinity is the top ranked university in Ireland and ranked 108th in the world (QS World University Rankings 2020). Trinity ranks in the top 50 in the world on 4 subjects and in the top 100 in 18 subjects (QS World University Rankings by Subject 2020). Full details are available at: www.tcd.ie/research/about/rankings.

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 Business, Enterprise and Innovation and further information on the Highly Skills Eligible Occupations List is set out in Schedule 3 of the Regulations

<https://dbei.gov.ie/en/What-We-Do/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://dbei.gov.ie/en/What-We-Do/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.

