Post Specification

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>Research Fellow in Interdisciplinary (Healthcare) Information Modelling</th>
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<tbody>
<tr>
<td>Post Status:</td>
<td>Specific Purpose Contract – Full-time [2 year contract]</td>
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<tr>
<td>Research Group /</td>
<td>ADAPT Centre, School of Computer Science &amp; Statistics Trinity College</td>
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<tr>
<td>Department / School:</td>
<td>Dublin, the University of Dublin</td>
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<tr>
<td>Location:</td>
<td>ADAPT Centre, School of Computer Science &amp; Statistics, Trinity College</td>
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<td>Dublin, the University of Dublin</td>
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<td></td>
<td>College Green, Dublin 2, Ireland</td>
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<tr>
<td>Reports to:</td>
<td>Prof Orla Hardiman / Prof John Kelleher /Prof Vinny Wade</td>
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<tr>
<td>Salary:</td>
<td>Appointment will be made on the [Post-Doctoral Researcher Pay Scale] at</td>
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<td></td>
<td>a point in line with Government Pay Policy [€41,525 - €61,423 per annum]</td>
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<tr>
<td>Hours of Work:</td>
<td>39 hours</td>
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<tr>
<td>Closing Date:</td>
<td>12 Noon (Irish Standard Time), 28 Oct 2022</td>
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Post Summary

Why Precision ALS?

- **Contribute** to the Precision ALS research agenda that will pioneer and combine research in AI driven healthcare technologies to create an innovative and interactive platform for all clinical research in ALS across Europe. The platform will harness artificial intelligence (AI) to analyse large amounts of data.
- **Work** with Clinicians, Computer Scientists, Information Engineers, Technologists, and Data Scientists at the SFI Research Centres ADAPT and FutureNeuro along with the TRICALS Consortium, Europe’s largest ALS research initiative, National and International industry partners.

As an ADAPT researcher you will have access to a network of global experts and a wide multi-disciplinary ecosystem across leading Irish universities. We can influence and inform your work, share our networks, and collaborate with you to increase your impact, and accelerate your career opportunities. Specifically, we offer:

- Exposure and free access within a multi-disciplinary ecosystem across leading Irish universities
● Opportunity to build your profile at international conferences and global events
● Fast-track your career through formalised training & development, expert one-on-one supervision, and exposure to top AI specialists

Research project/Challenge
● ALS/MND causes progressive decline in movement, cognition, and behaviour. Although uniformly fatal, life expectancy can vary from 3 months to many years from first symptom, and there are no effective treatments. Irish researchers, along with their European collaborations in ALS/MND, have shown that the disease is caused by variable combinations of faulty genes that likely interact with lifestyle and environment. Using “big data analysis,” Precision ALS will provide the technology to improve our understanding of how these factors impact the development of the disease. This in turn will inform which treatment will work for each individual instead of a one size fits all approach.
● The ambition of Precision ALS is to provide an innovative and interactive platform for all clinical research in ALS across Europe, which will then harness artificial intelligence (AI) to analyse large amounts of data.
● Precision-ALS will push the boundary on the integration of multiple datasets with heterogeneous feature sources and will examine the automated colorization and exploration of patient groups through an insight generation process.

Our Rationale
P-ALS is an interdisciplinary project involving continuous discovery, identification, validation, and use of integrated multimodal P-ALS information. The project requires an information pipeline that begins with identification of data and concludes with facilitation of well governed clinical research. The information pipeline is expected to serve the data needs of various users, integrate various multi-modal data, and cultivate good data governance. This work will require researchers to advance sociotechnical processes to support manual and automatic tasks along information pipelines to facilitate clinical research.

There are various areas of sociotechnical processes research which could be advanced through this work e.g. selection and validation of contextual based processes to identify multimodal data. Innovative processes for clinicians and data engineers to support validation, harmonisation, and governance of data as it progresses along an information pipeline. Balancing specific and generalisable aspects of end-to-end processes which support data governance along an information pipeline. Processes to ensure that the validated, integrated data progressing along an information pipeline is fit for human and machine research purpose.

Role
The role will involve interdisciplinary communication to identify and validate sociotechnical processes required to support understanding, implementation, and oversight of the P-ALS information pipeline. The processes chosen will be informed by research and interdisciplinary collaboration. There is an expectation that the research will result in contributions to health informatics academic literature and to the health informatics community.
Standard Duties and Responsibilities of the Post

- investigate SOA in sociotechnical processes to enable creation and oversight of a well governed information pipeline to support manual and machine-based aspects of clinical research involving integrated multimodal data.
- through interdisciplinary engagement, develop an understanding of the research needs of the various P-ALS users, the data to be integrated and the governance requirements.
- Contribute to the specification of the P-ALS information pipeline.
- through engagement with clinical researchers, technical designers and developers, data governance experts and data analysts specify characteristics of processes to support manual and automatic progression of well governed, multimodal, integrated data along the P-ALS information pipeline.
- choose processes for P-ALS that serve the entire information pipeline, and which cultivate good data governance.
- deploy the processes within the P-ALS project.
- evaluate the processes and contribute to academic literature.

Funding Information
This position is funded through the PrecisionALS Spokes project.

Person Specification

Qualifications
- Candidates should hold a qualification in healthcare and a PhD in Computer Science or related discipline

Knowledge & Experience (Essential & Desirable)

The candidate should

- have experience of health information as part of a health information system.
- have excellent communication skills.
- be an enthusiastic team player who is practiced at effective collaboration. Ability to work both in a team and to be self-directed where needed are essential.

The successful candidate would be based in TCD where they can work alongside the P-ALS information modeller and P-ALS information architects. They would also have the opportunity to collaborate with the wider ADAPT community researching information governance, sociotechnical processes, semantic modelling in other healthcare domains.

Application Procedure
Applicants should submit a full Curriculum Vitae and Cover Letter to include the names and contact details of 2 referees (including email addresses) via the following link:
https://forms.gle/Jvpc74cJdNgYpmAL8

- **Cover Letter**
  - A personal letter of motivation, indicating why you wish to participate in the research project offered and why you expect that you will be able to complete the research successfully.

- **CV**
  - Detailed curriculum vitae, including – if applicable – relevant publications.

**Further Information for Applicants**

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<tr>
<th>URL Link to Area</th>
<th><a href="http://www.tcd.ie">www.tcd.ie</a></th>
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<tbody>
<tr>
<td>URL Link to Human Resources</td>
<td><a href="https://www.tcd.ie/hr/">https://www.tcd.ie/hr/</a></td>
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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.

Application Procedure
Applicants should submit a full Curriculum Vitae and Cover Letter to include the names and contact details of 2 referees (including email addresses) via the following link:

https://forms.gle/Jvpc74cJdNgYpmAL8