Post Title: PhD Studentship

Post Status/Ref: Fixed Term, 4 years PhD Studentship in Interaction Support for Complex Geospatial Temporal Linked (RDF) Data.

Research Group/Department/School: ADAPT Centre, School of Computer Science and Statistics

Location: O'Reilly Institute, Trinity College Dublin, Dublin 2.

Funding: Payment of tax-free stipend of €18,500k. In addition, payment of academic fees.

Closing Date and Time: 12 Noon on 31st August 2018

Post Summary

This post will investigate how to facilitate those studying environmental triggers of disease to interact with geospatial-temporal linked environment data. The AVERT project, a joint Centre for Health Informatics, ADAPT and Trinity School of Medicine initiative, is investigating environmental triggers of clinical conditions and events. It provides an ideal environment to study how best to facilitate domain expert interaction in the process of dataset selection and prioritisation for integration into the AVERT knowledge base of environmental disease triggers. Linked Data tools designed with the processes and expertise of exposome researchers in mind will help to accelerate this expanding domain of research.

The approach will be domain-specific and user-centred. A first exploratory phase will glean from relevant research studies the kinds of explorations and analyses which are used in this research field. This will be followed by in-depth interviews with researchers who use geospatial-temporal environment data, to understand their needs and processes. A state of the art review will proceed in parallel. The main work of the PhD will be to design, develop and evaluate a domain-expert interaction approach that will best to support identified typical interactions and analyses required. The student will then test this infrastructure using the large live dataset of the AVERT project. The provision of such a domain expert interaction approach will enable AVERT domain experts and collaborators around the world to develop robust algorithms.

The PhD position within ADAPT will be supervised by Prof. Lucy Hederman, Prof. Mark Little, Prof. Declan O’Sullivan and Prof. Marguerite Barry (UCD).
**Duties and Responsibilities**

The successful candidate will work within a large group of Academics, Postdoctoral Researchers, PhD students and Software Developers. The successful candidate will research the specialist area of Interaction Support, specifically support for domain experts interacting with geospatial-temporal linked (RDF) data. The tasks to be performed as part of this position will include:

- Investigating how biostatistical domain experts analyze and interact with complex data.
- Developing innovative approaches to geospatial-temporal linked (RDF) data interaction support.
- Evaluating new interaction support approaches in authentic scenarios.
- Contributing to journal and conference publications.
- Contributing to short term, focused projects with ADAPT Industry Partners.

**Trinity College Dublin, the University of Dublin**

Founded in 1592, Trinity is at the nexus of tradition and innovation, offering undergraduate and postgraduate programmes across 24 schools and three faculties: arts, humanities, and social sciences; engineering, maths and science; and health sciences. Spread across 47 acres in Dublin’s city centre, Trinity’s 17,000-strong student body comes from all 32 counties of Ireland, and 16% of students come from outside the country. Of those, 40% are from outside the European Union, making Trinity’s campus cosmopolitan and bustling, with a focus on diversity.

As Ireland’s leading university, the pursuit of academic excellence through research and scholarship is at the heart of the Trinity education. Trinity is known for intellectual rigour, excellence, interdisciplinarity, and research-led teaching. Home to Nobel prize-winners such as scientist Ernest Walton and writer Samuel Beckett, 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.

**Background on the ADAPT Centre – [www.adaptcentre.ie](http://www.adaptcentre.ie)**

The ADAPT Centre is Ireland’s Centre of excellence for digital content technology. Funded by Science Foundation Ireland, ADAPT focuses on developing next generation digital technologies that transform how people communicate by helping to analyse, personalise and deliver digital data more effectively. ADAPT researchers are based in four leading universities: Trinity College Dublin, Dublin City University, University College Dublin and Dublin Institute of Technology. Our research is spearheading the development of next-generation digital technologies that enable seamless tech-mediated interaction and communication. The breadth of ADAPT’s research expertise is unique globally and the Centre's structure supports collaborative innovation with industry to unlock the potential of digital content.
**Why join The ADAPT Centre?**

1. 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 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.

2. 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.

3. 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 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.

4. As well as providing an exciting work environment with access to cutting edge research, ADAPT support flexible working hours for students and staff, and family friendly working practices.

**Person Specifications**

**Qualifications**
The successful candidate will have a Primary degree in Computer Science or Data Science with a minimum of II.I grade or equivalent.

**Skills & Competencies**
The successful candidate:

- Must display a keen interest in data science and human computer interaction.
- Strong programming and technical experience is a distinct advantage.
- Will be highly motivated, with strong written and oral communication skills and a demonstrated proficiency in software development, with strong design and programming skills.
- Must be eager to work in and learn from multi-disciplinary and multi- organisation teams.
- Should have English language certification if English is not their first language, the requirement being: IELTS: 7.0+, TOEFL iBT: 100+, TOEFL pBT: 600+, CEF: C1+, or equivalent.
Funding Information

The position is funded through the Science Foundation Ireland, the ADAPT Research Centre and EU project.

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.

Application Procedure

Please apply via email to vacancies@adaptcentre.ie and include a;

- Targeted cover letter (600-1000 words) expressing your suitability for the position
- Complete CV

Please include the reference code: PhD_AVERT on all correspondence.

There will be an interview process, and the successful candidate will be invited to apply via the TCD graduate studies admission system.

General enquires concerning this post can be addressed to hederman@tcd.ie

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