

Post Title: PhD Studentship in Health Identities

Anticipated start date: September 2021

Stipend: €18,500 per annum (non taxed) plus university fees

Location: TU Dublin

Closing Date: 3 May 2021

Apply: <https://forms.gle/9Ld2b1G3pFHFHiXS6>

Why ADAPT?

- **Contribute** to the ADAPT research agenda that pioneers and combines research in AI driven technologies: Natural Language Processing, Video/Text/Image/Speech processing, digital engagement & HCI, semantic modeling, personalisation, privacy & data governance.
- **Work** with our interdisciplinary team of leading experts from the complementary fields of, Social Sciences, Communications, Commerce/Fintech, Ethics, Law, Health, Environment and Sustainability.
- **Leverage our success.** ADAPT’s researchers have signed 43 collaborative research projects, 52 licence agreements and oversee 16 active commercialisation funds and 52 commercialisation awards. ADAPT has won 40 competitive EU research projects and obtained €18.5 million in non-exchequer non-commercial funding. Additionally, six spinout companies have been formed. ADAPT’s researchers have produced over 1,500 journal and conference publications and nearly 100 PhD students have been trained.

As an ADAPT funded PhD researcher you will have access to a network of 85 global experts and over 250 staff as well as a wide multi-disciplinary ecosystem across 8 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:

1. Opportunity to build your profile at international conferences and global events.
2. A solid career pathway through formalised training & development, expert one-on-one supervision and exposure to top specialists.
3. A Fully funded, 4 year PhD postgraduate studentship which includes a stipend of (€18,500 per annum - non taxed), along with equipment, annual travel funding
4. Funding for annual student fees

Context

Health information is recorded about a wide range of real world entities, including patients, healthcare professionals, medical products, healthcare organisations and rooms. Less tangible entities such as orders, appointments, visits, plans, guidelines and standards are also part of health information.

To maximise the efficacy of AI reasoning about health information, reliable 'digital twins' of health-related identities need to be created. For reasons of data privacy, some of these identities may need to be anonymised before they are accessed by an AI.

In order to assist a learning system to effectively integrate information from multiple sources, this work will create a format and metadata resources that

- Enable recognition of the wide range of 'digital twin' identities, trait sets and identity domains that are implicitly embedded in legacy health systems
- Provide high level ontological support to assist in explicitly relating identity instances of different types and to facilitate matching of identities of the same type across identity domains for the purposes of machine learning.

The proposed PhD research will enable the successful applicant to become an expert in an area that is pivotal for the application of artificial intelligence and data analytics to the healthcare domain. Upon completion of the research, the candidate will be in a position to work in ICT organisations that seek to use large datasets in healthcare and other sectors to make new discoveries and improve healthcare outcomes

The successful candidate can avail of the opportunity to undertake their research as part of an interdisciplinary team of eHealth experts across the ADAPT institutions.

The student will be co-supervised by [Prof Damon Berry](#) (TU Dublin), [Prof Gaye Stephens](#) (TCD) and [Prof Lucy Hederman](#) (TCD).

Minimum qualifications:

First Class Honours Undergraduate Degree in Computer Science or similar discipline.

Preferred qualifications:

- MSc in computer science, eHealth or aligned field.
- Skills: Programming, data science, eHealth

Informal queries may be directed to Gaye Stephens Gaye.Stephens@tcd.ie & Lucy Hederman lucy.hederman@adaptcentre.ie.

Application Process

As part of your application you will be required to submit

1. A Cover letter (800 words max) including
 - a. A personal letter of motivation, indicating why you wish to conduct this research project offered by ADAPT, and why you expect that you will be able to complete the research successfully; (500 words maximum)

- b. The letter should include a summary of your ideas (300 words maximum) for how you would approach the proposed research challenge with a specific focus on identity and 'digital twins' in the ehealth domain.
 2. Detailed curriculum vitae, including – if applicable – relevant publications;
 - a. Details of your final year undergraduate project (if applicable)
 - b. Details of your MSc project - *Applicants without an MSc to provide evidence of any research experience.*
 - c. Details of any relevant modules previously taken, at undergraduate and/or Master level.
 - d. Details of any relevant work experience (if applicable).
 3. Transcripts of degrees

Diversity

ADAPT is committed to achieving better diversity and gender representation at all levels of the organisation, across leadership, academic, operations, research staff and studentship levels. ADAPT is committed to the continued development of employment policies, procedures and practices that promote gender equality. On that basis we encourage and welcome talented people from all backgrounds to join ADAPT.

About the ADAPT Centre

ADAPT is the world-leading SFI research centre for AI Driven Digital Content Technology hosted by Trinity College Dublin. ADAPT's partner institutions include Dublin City University, University College Dublin, Technological University Dublin, Maynooth University, Munster Technological University, Athlone Institute of Technology, and the National University of Ireland Galway. ADAPT's research vision is to pioneer new forms of proactive, scalable, and integrated AI-driven Digital Content Technology that empower individuals and society to engage in digital experiences with control, inclusion, and accountability with the long term goal of a balanced digital society by 2030. ADAPT is pioneering new Human Centric AI techniques and technologies including personalisation, natural language processing, data analytics, intelligent machine translation human-computer interaction, as well as setting the standards for data governance, privacy and ethics for digital content.

Our Research Vision

Governments and civil society are starting to recognise the need for urgent and concerted action to address the societal impact of the accelerating pace of digital content technologies and the AI techniques that underpin them. ADAPT provides an ambitious, ground-breaking, integrated research programme that assembles three interlocking Strands that together are capable of addressing this challenge. Each of these complementary and reinforcing research Strands takes one of the different perspectives on the provision of personalised, immersive, multimodal digital engagement, i.e. the individual's experience and control of the engagement, the algorithms underlying digital content processing, and the balanced governance by enterprise and societal stakeholders.

Digitally Enhanced Engagement Strand

From the individual perspective, research within this Strand will deliver proactive agency techniques that sense, understand and proactively serve the needs of individual users to deliver relevant, contextualised and immersive multimodal experiences which also offer them meaningful control over the machine agency delivering those experiences.

Digital Content Transformation Strand

From the algorithmic perspective, new machine learning techniques will both enable more users to engage meaningfully with the increasing volumes of content globally in a more measurably effective manner, while ensuring the widest linguistic and cultural inclusion. It will enhance effective, robust integrated machine learning algorithms needed to provide multimodal content experiences with new levels of accuracy, multilingualism and explainability.

Transparent Digital Governance Strand

From the enterprise and societal perspective, new structured knowledge frameworks and associated practices for AI data governance will be required to balance the needs and values of individuals, organisations and society when it comes to rich digital experiences. This requires the advancement of research in the areas of data ethics, data quality, data protection, data value, data integration, and multi-stakeholder governance models.

HOST INSTITUTION



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

HOST INSTITUTION



PARTNER INSTITUTIONS



University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath
Ireland's Global University

