

<b>Post Title</b>	Postdoctoral Researcher in Neural correlates of trust in speech communication
<b>Post Duration</b>	12 Months
<b>Salary Scale</b>	IUA Postdoctoral Researcher Salary range €43,908 - €51,677
<b>Location</b>	The School of Computer Science & Statistics The O'Reilly Institute Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
<b>Reports to</b>	Giovanni Di Liberto
<b>Closing Date</b>	9th of August 2024

**Apply:**

### 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 modelling, 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 international research leadership, research excellence, industry collaborations, multidisciplinary outlook, strategic national position and the opportunities arising from its scale, make our researchers highly sought after for collaboration and highly competitive in international funding programmes and has competitively won over 40 European Research Projects.

**As an ADAPT researcher,** you will have access to a network of 85 global experts and over 250 staff, as well as a wide multidisciplinary 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:

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- Exposure and free access within a multidisciplinary ecosystem across 8 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

This project will investigate the possibility of robustly assessing trust in speech communication through non-invasive neural measurements. These measurements will be used to shed light on the role played by trust on the neural processing of speech, complementing existing models of speech perception. In addition, the project aims to investigate whether these metrics can be used to better understand and possibly improve human-machine communication. As such, these findings will impact research in both neuroscience and AI. The researcher carrying out this research project will develop skills that would be suitable for research in both academic and industry, especially in areas related to neuroscience, neural engineering, and AI.

### About the role

- Have a high-valuable impact to the project through the implementation of technical solutions to the project goals, in particular the behavioural and neurophysiology experiments for measuring the neural processing of trust
- Enhance your reputation through publishing in top-quality journals and conferences in collaboration with team members
- ADAPT's Research Development Team will help you develop your ideas into projects and establish a strong funding track record
- Collaborate with other team members across different universities (e.g., Prof. Ben Cowan, UCD) and industry, acquiring substantial expertise in how to lead an interdisciplinary academia-industry collaboration
- Contribute to the development of the next generation of thinkers and innovators through teaching and supervision activities (an appropriate plan will be discussed with the supervisor before the start of the position)
- You will have the opportunity to nationally and internationally present and represent the groundbreaking research carried out by you and the research team
- You will develop as a researcher through access to a wide training & development opportunities
- You will build a strong network through opportunities to liaise with internal and external stakeholders, including industry and academic partners/collaborators.
- Involvement with all aspects of the project lifecycle

### Minimum qualifications:

PhD or equivalent in computer science/engineering, neuroscience, or other relevant fields

### Preferred qualifications:

- Machine learning, especially time-series analysis, LLM, and speech processing
- Signal processing, especially neural data analysis (especially EEG or MEG)
- Prior experience running EEG experiments (or other similar technologies)
- Experience in psychoacoustics or other related areas

### Benefits

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

### Application Process

Interested candidates can submit their application via the link or to [giovanni.diliberto@adaptcentre.ie](mailto:giovanni.diliberto@adaptcentre.ie) (for e-mail).

Applications must include:

- Cover Letter
  - What would you like for your candidates to address in their cover letter?
  - 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;
- CV
  - Detailed curriculum vitae, including – if applicable – relevant publications;

Informal enquiries about the role can also be sent to, [giovanni.diliberto@adaptcentre.ie](mailto:giovanni.diliberto@adaptcentre.ie).

### 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, coordinated by Trinity College Dublin and based within Dublin City University, University College Dublin, Technological University Dublin, Maynooth University, Munster Technological University, Technological University of the Shannon, and the University of 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.

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