Postdoctoral Researcher in Human-Computer Interaction

Indicative (may not be final)

Expected Start Date: December 2025

Expected Salary: £51,174 ($68,793.46 USD equivalent) – KCL Grade 6.36)

Contact and Principal Investigator: timothy.neate@kcl.ac.uk

Principal Investigator website: tdjneate.github.io

Based: King's College London (Bush House), London, UK

Job Description

The Department of Informatics at King's College London is seeking to appoint a Postdoctoral Researcher with expertise in Human-Computer Interaction (HCI) and accessibility. This is a fixed-term, four-year research position.

The successful candidate will work on the UKRI Future Leaders Fellowship project *Total Communication Technologies to Support Accessible Communication (TACT),* led by Dr Timothy Neate. The project aims to re-imagine technology-mediated communication for people with communication disabilities, with a focus on supporting both verbal and non-verbal communication. The fellowship is funded for four years, with the possibility of extension to seven.

You will have access to excellent resources for personal development, travel and equipment. You will be part of a collaborative environment that includes partners and mentors from academia, industry, and the charity sector.

The role will involve close collaboration with a wide network of academic, industry, and charity partners. These include Microsoft Research, Tobii Dynavox, Transport for London, Hidden Disabilities, Aphasia Re-Connect, Dyscover, and Speech and Language UK, as well as academic collaborators such as Prof. Madeline Cruice (City, University of London), Prof. Jonathan Lazar (University of Maryland) and Prof. Karyn Moffatt (McGill University).

Project Overview

TACT is an interdisciplinary project that brings together human-computer interaction, human-AI interaction, accessibility, and language and communication science. The project aims to rethink how technology supports communication, with a focus on the experiences of people with communication disabilities. Its goal is to make communication more accessible by emphasising total communication – the use of both verbal and non-verbal forms – in assistive technologies and in everyday platforms such as video conferencing. TACT will explore both the opportunities and risks of using emerging AI models in this area, and it will examine how

discreet, wearable devices such as smartwatches and smart glasses can support communication in real-world settings.

The fellowship will conduct ethnographic and interview studies with two exemplar communication disability populations (people with aphasia and people with developmental language disorders). Building on these insights, we will co-design technologies with end users that enable total communication, integrating both verbal and non-verbal strategies. These technologies will then be evaluated through controlled studies and in situ trials with project partners, including within dynamic environments such as Transport for London infrastructure.

A full Gantt chart for the project can be found in the final page of this pdf.

Project Background

Communication is an important part of daily life. It usually combines spoken language with non-verbal cues such as gestures, tone of voice, or physical objects. For example, someone might point to a mug and raise a finger to mean "*tea with one sugar*" instead of saying it aloud. Some people also use cards or tools to explain their communication needs. This combination, known as *total communication*, is especially important for the 14 million people in the UK who experience communication difficulties. This includes around one in three stroke survivors and two to three children in every classroom

Despite its importance, total communication is often overlooked in the design of technologies, from video conferencing tools to specialist assistive technologies.

The TACT project aims to re-imagine how technology can support communication for people with disabilities. Working with people with aphasia and developmental language disorders, it will explore how new technologies, including AI, can enable more inclusive and flexible ways of communicating.

The Role and Its Context

The postdoctoral researcher will be responsible for leading the core HCI work of the project, focusing on the co-design of new communication technologies. This will include activities such as interviews, ethnographic studies, co-design workshops, and the prototyping of technology probes at a range of fidelities. The role involves working closely with people with aphasia and developmental language disorders, supported by speech and language experts from both academia and partner charities.

The researcher will also be expected to lead high-quality publications in venues such as ACM CHI and ACM ASSETS, with guidance from the PI, Co-I, and advisory team as appropriate.

The researcher will collaborate with another postdoctoral researcher specialising in human-centred AI (starting December 2026) and a speech and language therapy researcher employed on the project. They will also have the opportunity to support the supervision and development of one PhD student funded directly by the project (starting October 2026), another PhD student working alongside the project (starting October 2025), and several master's and undergraduate project students and interns.

The role is supported by a generous budget for travel and training. This includes visits to project partners in the USA (Microsoft Research) and Sweden (Tobii Dynavox), as well as to mentors in the USA and Canada. In addition, there is dedicated funding to attend both international and UK conferences. The fellowship also provides a budget to help with caring responsibilities, such as childcare during conference travel and other engagements.

The researcher will join the Human-Centred Computing (HCC) group at King's, which provides a supportive and collaborative environment and an exciting mix of disciplines. We are currently one of the top UK HCI groups in publishing at ACM CHI.

Dr Neate currently leads a team of two researchers and five PhD students, with a strong record of success. The team has won 13 paper awards at major conferences, including CHI and ASSETS, and has secured around £3M in research funding from a range of sources.

This post is offered on a fixed-term contract for 48 months (four years).

Key responsibilities

1. Work closely with the project team to ensure that the aims and objectives of the project are achieved in a timely and effective manner
2. Lead HCI and accessibility work on the fellowship
3. Conduct evaluation work of established concepts and prototypes
4. Lead papers for publication in conferences, journals, etc.
5. Support other researchers in the development of publications in conferences, journals, etc.
6. Participate in relevant events within the institution or externally, to build contacts to facilitate the exchange of information and advance thinking
7. Support events, conferences, and workshops run by the project to develop the project outputs and research agenda
8. Contribute to the development of further research proposals

The above list of responsibilities may not be exhaustive, and the post holder will be required to undertake such tasks and responsibilities as may reasonably be expected within the scope and grading of the post.

Skills, knowledge, and experience

Essential Criteria

1. PhD (awarded or close to completion), or equivalent experience in human-computer interaction, computer science, or similar
2. Expertise in human-computer interaction and/or accessibility
3. HCI skills in *understanding user needs* – e.g. interviewing, ethnography, etc.
4. Experience in co-design and/or user-centred design
5. Key roles in leading publications in related HCI venues (e.g., CHI, ASSETS, CSCW), ideally with paper awards or other recognition
6. Excellent communication – i.e. written and verbal skills
7. Excellent organizational and teamworking skills

Desirable Criteria

1. Expertise in co-design with users with accessibility needs
2. Experience with Human-AI interaction

3. Experience in working with HCI for videoconferencing
4. Experience working with AR headsets
5. Experience working with wearables