

PhD Scholarship in Human-Computer Interaction for Care at University College Dublin

University: University College Dublin

School: Information and Communication Studies

Primary Supervisor: Dr. Kevin Doherty (kevin.doherty@ucd.ie). AdAstra Asst. Professor of Human Computer Interaction at University College Dublin

Co-Supervisor: Prof. Susan Smith. Professor of General Practice, Public Health & Primary Care at Trinity College Dublin

Co-Supervisor: Dr. Lucy Hederman. Asst. Professor of Computer Science at Trinity College Dublin

Starting date: **9 September 2024**

Deadline for application: **12 August 2024**

Interviews with short-listed candidates: **19-28 August 2024**

Position: 100%, full-time position, tuition fees waived by the School

Remuneration: PhD studentship renewable for up to four years and consisting of:

- A PhD student stipend of €22,000 per annum (tax free)
- Equipment and travel funding to be made available by the primary supervisor
- Prioritisation as a scholarship student when applying for travel funding and overheads from the School of Information and Communication Studies

Eligibility: EU and non-EU students are equally eligible for studentships under this award

Requirement: Students accepted under this scheme must meet the university entry standards.

Description of the Post

The ADAPT Centre and School of Information and Communication Studies at University College Dublin is inviting applications for a fully-funded PhD scholarship under the supervision of Dr. Kevin Doherty.

This position would suit a curious and driven individual with a background in computer science, psychology or the health sciences and a desire to develop new skills and knowledge spanning diverse other disciplines, or a candidate with expertise and experience in the practice and methods of human-computer interaction, product and/or user interface design. This position provides the opportunity to make a real difference to the lived experience and practice of care for patients and healthcare professionals — through the design, development and evaluation of digital tools to support and advance care for chronic, co-morbid conditions through general practice.

The candidate will be interested in understanding, adopting and developing a human-centred approach to the design, development and evaluation of digital technologies to support care. The candidate will complete a research project of their own shaping with the objective of realising a real-world impact on the professional practice of primary care and lived experiences of individuals with chronic, co-morbid conditions. This project will broadly concern the design, development and evaluation of novel digital tools for increasingly caring and effective conversations and relationships between patients and general practitioners.

While this project will build directly upon a wealth of prior research by the interdisciplinary team of academic supervisors, the candidate will also be provided the scope to shape this project in the direction of their own interests, and as informed by an initial programme of needs-finding research. Possible research topics include, although are not limited to: new and innovative means of accessing and supporting the provision of health and mental healthcare; digital tools to facilitate the collaboration, coordination and decision-making of care, including to improve patient-provider relationships; understanding the role of materials, tools, methods and systems to improve the clinical practice of primary and/or secondary healthcare; the self-report, sharing and disclosure of health-related data to advance wellbeing on individual and/or population scales; the practice of participatory design for health technology acceptance, engagement and adoption; and the development and evaluation of novel tools to support the leveraging of health data for care.

All outstanding applicants with a keen interest in the design, development and evaluation of digital technology to support health and healthcare will be considered. The candidate will be skilled in qualitative and/or quantitative research methods, and possess or be willing to learn design skills including digital and/or tangible prototyping methods, and other creative research practices. Programming skills are strongly desirable although not required, as is knowledge of mixed-methods approaches to research, experience working in the health context and/or with interdisciplinary ways of working.

The candidate will join the School of Information and Communication Studies at UCD, a vibrant and growing community of interdisciplinary scholars which includes the HCI@UCD

group, and spans diverse other schools including the Schools of Computer Science and Psychology. You will also join ADAPT, the world-leading SFI Research Centre for AI-Driven Digital Content Technology, bringing leading academics, researchers and industry partners together to deliver excellent science, engage the public, and pioneer new digital technologies empowering individuals and society through a human-centric computer science. 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 multidisciplinary ecosystem across 8 leading Irish universities, providing exceptional career support through formalised training & development, expert one-on-one supervision and exposure to top specialists.

This role will be supervised by an interdisciplinary team of highly-experienced academics spanning the fields of human-computer interaction, computer science and primary care — creating a unique learning experience for the chosen candidate as well as the opportunity to make significant contributions to multiple academic fields, and a real-world impact on the practice of healthcare. The chosen candidate for this role will furthermore benefit from the expert input of a wide range of academic, industry and clinical partners spanning Ireland, the UK and Scandinavia, and will be expected to foster these and other collaborations throughout this project; including with patients, patient organisations, health professionals, and the broader public.

Research Area

Healthcare, and the healthcare challenges we face as individuals and populations, are changing. Increasingly, patients and health professionals are tasked with caring for health conditions chronic, complex and co-morbid in nature. These conditions, combining physical and mental health concerns, require the coordination of care across services and specialities - as well as practices of medical decision-making - not only in support of diagnosis and acute intervention but the provision and organisation of long-term care. Despite a long-standing focus on person-centred care, prior research by the co-supervisors of this PhD project, conducted in the international context of general practice, has highlighted, among patients and GPs in Ireland as elsewhere, the significance of the challenge of managing complex multimorbidity in primary care — yielding as a result poorer clinical outcomes, less efficient healthcare delivery, and limiting the quality and experience of care.

Adopting a participatory, user-centred approach to the development of a bespoke digital health technology to advance the practice of primary care for chronic, co-morbid conditions, this PhD project will provide new insight into the black box of the clinical encounter, while realising new avenues for patients and healthcare professionals alike to foster caring relationships in support of increasingly positive experiences and effective practices of care. The objectives of this interdisciplinary PhD project include to advance our understanding of the role of health data technologies in supporting person-centred practices of care beyond diagnosis and prognosis, progress the participatory design of novel digital tools to foster more effective conversations and relationships between GPs and patients, and to implement, deploy and evaluate by pilot feasibility study a novel digital tool to support care

for chronic, co-morbid conditions —embracing the complex context of primary care as an opportunity to develop an increasingly human-centred approach to health technology development.

The post-holder will draw on and contribute to an interdisciplinary body of research literature spanning the fields of Human-Computer Interaction, Computer Science, Science and Technology Studies, Psychology and Public Health. Other relevant research backgrounds may include, although are not limited to: engineering, design, sociology, information science, ethics, and/or the philosophy of technology.

Responsibilities

The post-holder will be expected to write and successfully defend a PhD thesis focused on the areas listed in the description of the post and meet the degree requirements set by UCD to advance through the PhD programme. The candidate is also expected to produce research outputs in relation to their doctoral research and attend conferences to disseminate the research findings. The post-holder will work closely with their supervisor to produce outputs relating to their combined research areas; and will ideally produce first- and co-authored research contributions by the end of the post.

The candidate is expected to take part in seminars, workshops, and events organised within the School and across University College Dublin as relevant to the project. The post-holder will also be expected to contribute to the intellectual life of the School and University, and to participate in research activities to the level and extent of their qualifications.

The candidate will also be expected to complete a total of 30 ECTS credits spread across the post as part of the university's structured PhD path. Finally, the candidate will engage in teaching and tutor training in the course of their studies; including in relation to the School's Masters in Human-Computer Interaction programme.

Role profile

Candidates are expected to be familiar with, proficient in or willing to learn and employ both qualitative and quantitative research methods including, although not limited to, interviews, workshops, observations, field work, and feasibility studies. Candidates should be prepared to engage with a range of methods, theories and approaches.

Post Requirements

Strong command of English is essential. English proficiency at the C2 or C1 level of the Common European Framework of Reference for Languages (CEFR) is required.

Candidates are expected to hold a Master's Degree in Human-Computer Interaction, Design, Computer Science, Engineering, Media and Communication, Science and Technology Studies, Public Health, Psychology or a related field.

The candidate should be able to demonstrate exceptional organisational experience and skills.

Applications are open to students of all nationalities and backgrounds. Women and people of colour are especially encouraged to apply.

How to Apply

Applications must be submitted via UCD's application portal (a €50 application fee applies): <https://www.ucd.ie/registry/prospectivestudents/admissions/graduateapplicants/applying/>

The candidate should apply to **Programme Code W139**. Please see the ICS and UCD Graduate Studies sites for further, detailed application requirements: <https://www.ucd.ie/ics/study/phdresearchprogrammes/> and <https://www.ucd.ie/graduatestudies/studywithus/applicationprocess/>

Each application should consist of;

1. A curriculum vitae, including – if applicable – relevant, prior publications,
2. The name and email contacts of two academic referees,
3. A cover letter (max 1000 words) providing an explanation of your interest in the research to be conducted and why you believe you are suitable for the position,
4. A brief PhD project outline (max 1000 words) outlining - in your own words and preferred format – the focus, methodology, outcomes and impact you would like to embrace and realise through this research, including why you believe this important
5. An additional writing sample, preferably a piece that has been published or a chapter of a thesis.

Online interviews will be conducted with shortlisted candidates shortly after the closing date. Applications will be reviewed through our system of open, transparent, and merit-based recruitment of researchers.

For any questions related to this post please contact Dr. Kevin Doherty at kevin.doherty@ucd.ie