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2024



Centre for Human-Computer Interaction Design Activities Report

Colophon

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HCID members

Centre Directors Sara Heitlinger Stephanie Wilson

Programme Directors MSc in Human Computer Interaction Design (HCID) Belén Barros Pena Tracey Booth

MSc in Data, Policy and Society Ernesto Priego

Academic Staff

Belén Barros Pena Tracey Booth Sara Heitlinger Andrew MacFarlane Stephann Makri Ernesto Priego Tom Stead Stephanie Wilson

Interaction Lab Manager Stuart Scott

Visiting Lecturers Sylwia Frankowska-Takhari Pete Goodman **Research Associates and Fellows** Inemesit Emmanuel Wyncelia Lieng Abi Roper

PhD students Linda Berube Larisa Blazic Helena Lyhme Axel Niklasson Monica Visani Scozzi

Honorary Members Richard Banks Meghan Lambert Tim Neate Alex Taylor

Forewords Rajkumar Roy

Human Computer Interaction Design (HCID) research, education and consultancy is an example of what City St George's, University of London does best. For over thirty years, the HCID research group has been connecting with business, practice and the professions through excellent research and, since 2004, a world-class teaching programme. This is very much in line with City's vision and strategy 2022-30 on undertaking research at the frontier of practice. The team of experts are collaborating with others from healthcare, business and design communities to develop life-changing interventions and industry solutions to enhance creativity. The research studies the symbiosis of technology with varied forms of life and expands human capacity to address major societal challenges.

HCID research has achieved a significant milestone by winning an EPSRC Centre for Doctoral Training (CDT) on Diversity in Data Visualisation in collaboration with our giCentre and the University of Warwick. This first-of-its-kind CDT will offer research career paths to currently under-represented groups in the data visualisation sector with the goal of upskilling the wider workforce to harness the benefits of data visualisation. The EPSRCfunded project on Inclusive Data Visualisation for Human-Centred Decision-Making for people with communication impairments and developmental disorders builds on our longstanding research on INclusive digital Content for people with Aphasia (INCA). Collaborating with our School of Health and Psychological Sciences, HCID has developed interventions that are used by people with aphasia. The ethical design theme of HCID has also led to another major success in a UKRI-funded

Future Leaders Fellowship on designing 'morethan-human' smart cities. The research will



Professor Rajkumar Roy, Executive Dean, School of Science and Technology

transform urban planning for smart cities and redefine practice and policy making.

We are proud of our MSc HCID students. They are change-leaders across many countries. Hands-on learning in user experience (UX) and design takes place in our City St George's Interaction Laboratory and the new Office for Students funded AR/VR Learning Centre: world-class facilities suitable for the future of learning and teaching. This hands-on approach is the hallmark of learning and is at the heart of the university's strategy, as it prepares students for the world of work. We are also growing our education and academic enterprise portfolio to address new aspects of the field, such as ethical design and new technologies. Design for Good is a major theme in our education and training and it is supported by our Ethical Design Studio and an MSc module on Design Justice. The HCID team also offers a Computer Science, Ethics & Society module to all undergraduate Computer Science students. These education and training initiatives include regular speakers from industry and other research groups to provide the best and most thoughtprovoking education for our students. This booklet provides an in-depth account of the success and capability of the HCID group.

Alex Taylor

It's such a pleasure to write a few words about my time in HCID and my work alongside the inspirational group of people who have both passed through and remain in HCID. Even though my time with the group was too brief at a mere six years, I shared much and gained so much more.

Moving from the tech sector to academia, and to City St George's (just City then) almost ten years ago, was an important change for me. With the sector expanding but at the same time abuzz with controversies particularly those linked to AI - I felt an urgency to ask difficult questions about technological innovation. The pervasive presence of technology in everyday life was, even back then, revealing the troubling underbelly of corporate-driven, technological progress. Early versions of generative AI were already exhibiting worrying signs of amplifying discrimination and hate (as they continue to do today), and large internet platforms' reliance on outsourced, extractive labour practices was being exposed (again, something that persists).

I knew the work of questioning and challenging these controversies would need a network of supportive colleagues, ready to feed an intellectual curiosity and create the conditions for change. While I found support for this in HCID, what I had not anticipated was the much more significant role of friendship, care and a collective spirit. What so many in HCID taught me was the importance friendship and care play in academic life, and how they — set against the grind of the academy — nourish, yes, an intellectual curiosity but also the will to make a difference in the research we do and in our teaching.

What makes HCID so special is its sense as a collective project. Some academics

will have had the good fortune to encounter generative partnerships built on friendship, warmth and care: a real difference is made when something more

comes from a

shared enterprise



Dr Alex Taylor, Reader in Design Informatics at the University of Edinburgh

and an openness to being together. HCID sustains this collective atmosphere in all it does; in its mundane processes and daily activities, and the bigger events it organises, like the Open Day. I have no doubt that you will feel the warmth this year.

I have learnt the importance of the collective, the aggregate, from being part of HCID. I see how it has emboldened the group's efforts to direct original research targeting fuller lives for the people that use technology and crucial work that looks beyond a human-centredness to consider the tangled relations across actors and species of all kinds. It has also helped to expand the repertoire of design in teaching, enabling the boldness to carve out innovative curricula in responsibility and justice that appeals to new cohorts pursuing careers in UX and design.

I have a long list of friends to thank for all I have encountered and learnt from HCID. Among them are Belén Baros Pena, Larisa Blazic, Tracey Booth, Adrian Bussone, Carol Butler, Alena Denisova, Lara Houston, Alex Leigh, Stephann Makri, Axel Niklasson, Andy MacFarlane, Tim Neate, Ernesto Priego, Abi Roper, Stuart Scott, Simone Stumpf, Beatrice Vincenzi, and Ana Weller. My deepest gratitude must go to Sara Hetlinger and Steph Wilson.

Introduction

Sara Heitlinger and Stephanie Wilson

This HCID booklet presents a selection of the many HCID activities and profiles of HCID people from 2023-2024. As you will discover from these pages, HCID combines excellence in research, teaching and consultancy with a unique ethos and spirit of collaboration and collective care. Everyone who knows HCID has experienced this; one of the aims of this booklet is to share more broadly what we do, and how we do it.

The booklet presents a small snapshot of activities, but it is by no means comprehensive. It was assembled at a particular moment in time, in the summer of 2024. We have come out of the challenging COVID years, like so many others, with much changed from before. We have recently said goodbye to valued colleagues (Simone Stumpf in 2021 and Alex Taylor in 2023, who were both programme directors and centre directors), but also welcomed brilliant new colleagues, Belén Barros Pena and Tom Stead. We will be recruiting more staff this year.

Our MSc HCID programme is thriving. Despite sector-wide difficulties, especially regarding postgraduate recruitment, for the 2024-2025 intake, we have recruited excellent students onto our programme and exceeded targets. We look forward to welcoming them. Their diverse cultural and educational backgrounds enrich the student experience. In these pages, you can read about our teaching activities from staff, students and alumni.

We have also been very active in research. We share here a selection of research activities, including from projects, engagement activities and publications. We also present City Interaction Lab, a UX facility based in HCID that offers consultancy, training and facilities. The lab is used by external companies to test their products and supports our research. It is also used by students, who gain real-world paid experience and a chance to put into practice the skills they learn in the classroom.

We have much to look forward to: we are at the start of a new period of growth and flourishing. We have some very large research projects starting, including a new EPSRC-funded centre for doctoral training in collaboration with the giCentre at City St George's and the University of Warwick, which will train sixty new PhDs in Diverse Data Visualisation over eight and a half years. We are also hosting Sara's UKRIfunded Future Leaders Fellowship, which will run for four years, and will bring with it new staff and a PhD researcher. We are developing research strength in new areas; for example we are building relations with the new Institute for Creativity and AI. Next year, we will launch a new MSc in Data, Policy and Society, a unique collaboration between HCID and the Department of Sociology and Criminology in the School of Policy and Global Affairs. In September 2024, Sara joined Stephanie Wilson as Co-Director of HCID.

In these pages, we hope to convey the sense of joy, camaraderie, intellectual stimulation and collective support that we experience within HCID. Please get in touch if you would like to find out more, or wish to collaborate, learn or work with us in the future.



HCID writing retreat at St Margaret's House in Bethnal Green, 2023

HCID Charter

The Centre for Human-Computer Interaction Design's Charter is a work-in-progress, an ethos that we aspire towards in our collective endeavour. Between HCID members and through our designbased research, teaching and commercial work, we strive to make a difference. We are motivated by the possibilities of enlarging human capacity and creating the conditions for better ways of living together with technology. Our ethos is demonstrated through our approach to studies, co-design, intervention and care.

Studies

Looking outwards to the worlds we engage with and study, our commitment is to improve the health, wellbeing and security of individuals, communities, and the planet. At the same time we uphold rights to equity, fun, prosperity, fairness, justice and collective determination. Working inventively with empirical and creative design methods that are sensitive to the needs of diverse humans (and non-humans), our scholarly practices aim to enrich and deepen our understandings of those living in technology-mediated worlds.

Co-Design

Our studies are distinguished by their commitment to co-designing interactions and experiences with others, including those who may not typically be involved in design. We use methods that share power, authority and agency and strive for transparency, accessibility, and full representation. We recognise the value of diverse perspectives and see design as a way to work critically towards preferable futures and outcomes.



HCID summer picnic, 2024

Intervention

We seek to intervene in the role technologies play in routine life. Our interventions address the politics inherent in designing technology, aiming to raise questions about presumed norms and to create the conditions for more to happen and difference to flourish. Design intervention becomes the vehicle for co-imagining alternative worlds; for a collective adventure in making worlds otherwise.

Care

Our collective investment in studies, co-design and intervention are shaped by practices of care. We seek to build an environment in which care for one another and care for our labour is not diminished or erased in our work. In caring for one another, we recognise the precarity and unevenness of our relations, but also what we are capable of in our collective world-making work.

Honorary Member Profile Richard Banks

In the eighteen years that I have been part of Microsoft Research I have worked closely with many design and HCI university departments in the UK and Europe. City St George's Centre for Human-Computer Interaction Design (HCID) is the one place that I have come across that successfully combines two quite different cultures, bringing together the "serious work" of human-centred study through rigorous social science, alongside the creativity and innovation of design practice. I do not underestimate how difficult this is, since it is something that we strive for in my own team in our lab in Cambridge. These cultures can have quite different philosophies and vocabularies of work. Although they seem like natural bedfellows, they often are not.

I originally connected with HCID many years ago as a guest lecturer on a module they run with their MSc HCID students focused on creativity. I remember at the time being struck by the emphasis that the course gave to some of the simplest and (to me) most important aspects of design - the practice of sketching, collecting, synthesis and openness to inspiration, for example. Knowing that the course was also teaching these same students the rigorous methodologies needed to undertake insightful human-subjects research clarified HCID's goal of giving their students and researchers a truly rounded outlook in their work. My experience acting as a supervisor for several MSc students since then as they worked on their thesis projects showed me that they are taught to move along the continuum of user research to idea generation, and then delivery, with fluency.

The heart of HCID sits with its researchers and faculty, who not only demonstrate best practices in socio-technical research, but also emphasise the importance of values. I gave a keynote lecture at the HCID Open Day in 2023 and was struck by the emphasis, time and again in talks by HCID faculty's continuous emphasis in their talks on issues of ethics, design for good, and on approaching work through an ecological lens. In my experience at Microsoft Research, these issues are no longer "nice to have," but (particularly with the advancement of AI) core to new forms of industrial practice. An emphasis on these issues helps futureproof HCID as it engages with new ideas, uncovers new insights, and teaches the practitioners of tomorrow.



Professor Richard Banks, Principal Design Manager for Microsoft Research

Open Day 2023 Highlights

Sara Heitlinger

Every year (barring a couple of COVID years), we have hosted a one-day mini conference called the HCID Open Day. In 2022, we introduced the theme "Design for Good" to the open day, which was followed in 2023 with the theme "Design Better". Sponsored by City Interaction Lab (based in HCID) and the UX consultancy, Bold Insight, the event took place on the 14th June, 2023 and featured thought-provoking keynotes. presentations and panel discussions. Recently described by attendees as a "mini-CHI", refering to the ACM Conference on Human Factors in Computing Systems (CHI), the event brings together researchers and practitioners from industry, academia, government, and the third sector to present cutting-edge work in UX and design. There were twenty-eight talks across three concurrent tracks, including three keynotes, one panel and networking. Over 230 attendees came. The conference covered a range of discussions on leading technologies of the day and how they impact on individuals, society and the environment. Keynotes were given by Catherine Holloway,



Professor of Interaction Design & Innovation and Academic Director of the Global Disability Innovation Hub at UCL; Richard Banks, Principal Design Manager from Microsoft Research; and Alex Taylor, who was then co-director of HCID.

Alex Taylor reflected on the day: "The topics we discussed were all inspired and thought provoking; they reflected where we are and what we strive to achieve as human-computer interaction design researchers and students."

You can read <u>a write-up from one attendee</u> here.

The 2024 HCID Open Day takes place on 18th September, with the theme "Design for All." Keynotes include Professor Laura Forlano from Northeastern University in the USA and Tobias Revell, Design Futures Lead at Arup Foresight.

More-than-human design panel with Sara Heitlinger (HCID), Lauren Davies (Arup) and Ruth Catlow (Furtherfield), chaired by Stephann Makri (HCID)

HCID Timeline

| 1991 | Alistair Sutcliffe establishes the Centre for HCI Design (HCID) and serves as the first Director |
|------|---|
| 1999 | Neil Maiden takes over as Director of HCID |
| 2000 | HCID wins a £312,000 share of a £750,000 EPSRC award to the Systems Integration for Major Projects (SIMP) in partnership with UMIST, Queen Mary Westfield, BAE Systems and Kennedy-Carter |
| | HCID attracts industrial funding, working with Daimler-Chrysler A.G. in Germany to apply scenario-based CREWS-SAVRE approach as part of EU-funded CORONET project |
| 2004 | MSc Human-Centred Systems (HCS) is established at HCID, one of the largest courses in the country specialising in UX and HCI. |
| | Panayiotis Zaphiris is appointed MSc HCS Programme Director |
| 2006 | Interaction Lab is established at HCID. Vodafone UK Foundation donates £50,000 to help drive accessible technology solutions, in particular for disabled and elderly people |
| 2007 | Russ Sese appointed to Interaction Lab Manager |
| 2008 | Rajiv Arjan appointed to Interaction Lab Manager |
| 2010 | Simone Stumpf appointed MSc HCID Programme Director |
| 2013 | George Buchanan appointed Director of HCID |
| | Stuart Scott appointed to Interaction Lab Manager |
| 2016 | Simone Stumpf and Stephanie Wilson appointed Co-Directors of HCID |
| | Silver Anniversary/ 25 Years as one of the centres for HCI research, teaching and practice in the UK |
| 2018 | Andy MacFarlane joins Stephanie Wilson as Co-Director of HCID |
| | Alex Taylor and Stephann Makri appointed Programme Co-Directors of the MSc HCID |
| 2019 | Alex Taylor joins Stephanie Wilson as Co-Director of HCID |
| 2020 | Simone Stumpf reappointed as MSc HCID Programme Director |
| | |

| Stephann Makri and Stephanie Wilson appointed as MSc HCID Programme Co-Directors Alex Taylor and Sara Heitlinger appointed as MSc HCID Programme Co-Directors Stephann Makri joins Stephanie Wilson as Co-Director of HCID Belén Barros Pena joins Sara Heitlinger as Programme Co-Director for the MSc HCID Stephanie Wilson and a Cross-School research team awarded £609,000 for the EPSRC-funded "Inclusive Data Visualisation for Human-Centred Decision-Making |
|---|
| Stephann Makri joins Stephanie Wilson as Co-Director of HCID Belén Barros Pena joins Sara Heitlinger as Programme Co-Director for the MSc HCID Stephanie Wilson and a Cross-School research team awarded £609,000 for the EPSRC-funded "Inclusive Data Visualisation for Human-Centred Decision-Making |
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| Stephanie Wilson and a Cross-School research team awarded £609,000 for the EPSRC-funded "Inclusive Data Visualisation for Human-Centred Decision-Making |
| EPSRC-funded "Inclusive Data Visualisation for Human-Centred Decision-Making |
| (DARA)" project, in partnership with Raising Awareness of Developmental Language Disorder, Say Aphasia and Stroke Association. |
| Stephanie Wilson awarded over £10m grant for new EPSRC Centre for Doctoral Training in Diversity in Data Visualisation with the giCentre and University of Warwick |
| Sara Heitlinger awarded UKRI Future Leaders Fellowship, £1.6m grant for More- than-Human Sustainable and Inclusive Smart Cities |
| Sara Heitlinger joins Stephanie Wilson as Co-Director of HCID |
| Tracey Booth joins Belén Barros Pena as Programme Co-Director of MSc HCID |
| |

Alexa for Aphasia

Dara

Information Access for Aphasia

Research Profile: Stephanie Wilson

Book Launch

More-than-Human Water Policy

Longitude prize

Caring Money

PhD profiles

Research Highlights

Overview

Sara Heitlinger

In HCID, we aim to foster a collaborative and stimulating research environment by structuring activities in which we can share knowledge and best practice and continue to develop and evolve. One way we do this is with our weekly research group where we come together over lunch or coffee in the HCID kitchen to discuss a researchrelated topic, issue or project. Recently, we had sessions dedicated to reporting back from conference attendance and a doctoral consortium; practice runs for presentations; getting peer support for grant applications; discussion of a paper someone is reading; getting feedback on a study analysis; discussion around the value of participation in research. We sometimes have guest speakers attend when they are visiting HCID. Anyone in HCID can suggest a topic for research group and all HCID staff, researchers and guests are welcome to attend.

We keep abreast of new research and support new collaboration opportunities through our monthly HCID seminar series. In 2023-2024, guest speakers included: Richard Banks (Microsoft Research), Ruth Catlow (Furtherfield), Professor Marcus Foth (QUT), Dr Rachel Clarke (UAL), Professor Lizzie Coles-Kemp (Royal Holloway), Professor Simone Stumpf (Glasgow University), Surasti Puri (Data4Change), and Dr Sondess Missaoui (University of York).

We regularly organise writing retreats and "shut up and write" sessions to support members (including PhD researchers) overcome their writing hurdles. These facilitated sessions take place off campus (or at least in a different building) and last from two hours to a whole day. They are structured around goal setting, short bursts of writing, followed by short discussions and



Doctoral researcher, Larisa Blazic, practicing her presentation for the doctoral consortium at DIS conference at research group. Visiting researcher, Professor Marcus Foth from QUT provided feedback



HCID away day 2024 at the London Canal Museum

peer support to help overcome our writing challenges. These sessions have proved invaluable for PhD researchers as well as members working on grant applications and academic papers.

We have regular away days for all HCID members. These take place off-site and are a chance to reflect and plan future directions for the centre. They allow us to take a longer and more strategic view of how we want to evolve and where we want to dedicate our efforts. They also help inspire and galvanise energy for the future.

These activities undertaken to support a collaborative and thriving research environment have resulted in some very large grants in the last year, including a £10m EPSRC Centre for Doctoral Training in *Diversity in Data Visualisation* led by Stephanie Wilson (HCID) and Jason Dykes from the giCentre; a £1.6m UKRI-funded Future Leaders Fellowship awarded to Sara Heitlinger (HCID) for the *More-than-Human Sustainable and Inclusive Smart Cities* project; and a £609k EPSRC-funded crossschool project led by Stephanie Wilson, called *Inclusive Data Visualisations for Human-Centred Decision-Making*.

What follows is a selection of research projects and engagement activities that HCID members have led or taken part in, often in collaboration with other organisations from business, academia, government and the third sector. Some of the organisations we have worked with recently include: the Department for Environment, Food and Rural Affairs (Defra), Arup, Memory Lane Games, Natural History Museum, the Ordnance Survey, British Red Cross, the Stroke Association and the University of Warwick.

We have also been pleased to see a number of PhD researchers graduate recently (including Dr Alex Leigh, Dr Beatrice Vincenzi, Dr Divy Thakker, and Dr Lynne Beveridge) and to welcome new PhD researchers Helena Lyhme and Monica Visani Scozzi.

Using Alexa Devices to Support Aphasia Therapy

Abi Roper, Stephanie Wilson and Katerina Hilari

Abi Roper (HCID), Stepanie Wilson (HCID), and Katerina Hilari (Department of Language and Communication Science)

Aphasia is a language disability that occurs as a result of changes in the brain — for example due to a stroke or brain tumour. HCID and the Department of Language and Communication Science at City St George's have a longstanding collaboration exploring the role of technology in supporting aphasia therapy.

In 2023, Dr Abi Roper led an exploratory project funded through a pump-priming scheme at City St George's that sought to understand how everyday devices such as Alexa could be used to support spoken language practice for people with aphasia. It forms part of a broader research programme aiming to develop and test language therapy skills for the voice-initiated technology Amazon Alexa based on modifications of an existing clinical therapy.

The exploratory study involved two participants with aphasia who practised therapy exercises using an Amazon Firestick. The Firestick presents visual and audio information through a TV set and uses a handset push-button interaction to initiate

 Group
 Use
 Properties

 Fruit
 Drinks
 Round

 (is a _)
 (is used for/to _)
 (is found _)

 Location
 Use
 Use

 (is found _)
 Use
 (reminds me of _)

 Name a group the picture belongs to.
 Description
 Description

voice interactions (in the place of the usual "Alexa" wake word). Participants completed language assessments before and after therapy and took part in an end-of-project interview. One participant completed five full weeks of practice and made statistically significant gains to the number of spoken words they could produce. The second participant discontinued his use of the skill after one week, reporting frustration that his utterances were commonly met with unpredictable responses.

Both participants found that the system did not always correctly recognise their speech. Initial findings indicate potential for the use of mainstream voice recognition technologies for aphasia therapy, but demonstrate that more research is required to make such systems user-friendly. Outcomes from this study are being used to inform a forthcoming co-design project with collaborators with lived experience of aphasia to develop aphasia voice interaction design guidelines for developers and researchers.



Example of the therapy skill set up on a large television screen and a close-up image of the Firestick remote control and USB dongle

Dara: Inclusive Data Visualisation for Human Centred Decision-Making

Steph Wilson

Funded under the EPSRC's call "Enabling Human Centred Decision Making through Data Visualisation", the three-year Dara project is undertaking research into inclusive data visualisation. This has been driven by the recognition that accessibility research in data visualisation has previously considered the needs of people with visual impairments and learning disabilities, but has not explored the needs of people with language disabilities. Dara will lead the way in focusing on adults with Developmental Language Disorder (DLD) and aphasia, and their use of data visualisations in everyday decision making.

Developmental Language Disorder (DLD) is a language disability with no obvious cause that persists from childhood into adulthood and is estimated to occur in 7% of the population. Aphasia is an acquired language disability that occurs after a brain injury, most commonly after a stroke, and an estimated 350,000 people are living with aphasia in the UK. An initial scoping review has revealed that adults with DLD and aphasia do use data visualisation but not always in expected ways and that some visualisations are challenging to use.

Building on this, we are currently running in-depth studies to investigate how people use and experience data visualisations for everyday decision-making. We want to know what works well, what barriers people face, and what workarounds they adopt. We will then use this knowledge in cocreation to design and test new, inclusive approaches to visualisation.



Dara project meeting: thinking creatively about data visualisation



Physicialisation of heart rate data used in Dara studies of the accessibility of data visualisations

Improving Information Access for Users with Aphasia

Andy MacFarlane

Search technologies are used in many contexts to support information access and information seeking for personal needs (e.g., finding holidays), employment (e.g. finding information to complete a report), or even civic activities (e.g., voting decisions). The activity of searching is complex and comprises various phases including formulating and issuing a query followed by a scan of retrieved documents in a results list (e.g., Search Engine Results Page -SERP), followed by a scan of individual documents that can provide information to resolve a given need.

Due to the language-laden nature of such search processes, users with language or communication impairments such as aphasia face difficulties, such as choosing appropriate search terms and an inability to extract key information from results lists and documents, which may inhibit their ability to resolve their information needs. We concucted a study with fourteen users with either mild or moderate aphasia and uncovered the following issues:

Starting search: Difficulties with conceptualising and with verbalising the information need. Users may have a clear idea of their information need, but are unable to express it as they cannot access the appropriate language in order to initiate their search.

Formulating queries: Difficulties with word recall, query formulating, and spelling. Even when users were able to initiate a search, actually forming a query was very challenging. Some users used a workaround by browsing (e.g., Amazon categories). Assessing results: Difficulties interpreting search results and difficulties keeping track of place in search. Users used strategies such as browser tabs to keep a record of potentially interesting results without having to navigate complex and confusing search results.

Interpreting webpages and documents: Difficulties reading and interpreting text. One user highlighted the problem he was having by highlight text and expressing 'nothing nothing nothing' to illustrate his inability to understand the language presented to him. Users utilised accessible technologies such as text to speech, and highlighting blocks of text to read through segments without being overloaded with information.

The next steps in this work is to use the aphasia useability framework developed over the years in HCID and apply it to this rather complex but very interesting problem.

Improving information access to users with aphasia provides them with an opportunity to re-engage with society after a profound and traumatic event in their lives that has adversely impacted them.

Research Profile Professor Stephanie Wilson

Sara Heitlinger

Stephanie Wilson is a research powerhouse. She has led HCID since 2016. She leads large research projects including the EPSRCfunded Dara project and the Diverse Data Viz Centre for Doctoral Training. What might be less well known outside HCID is how she fosters and supports a thriving and inclusive research culture at City St George's. This year, her contributions to research excellence were recognised with a Dean's Award for Research Excellence in the School for Science and Technology. The nomination for Professor Wilson was supported by the overwhelming majority of the award panel members.

Comments from the nominators included:

"Steph has been exceptional at nurturing a vibrant research culture within HCID. Despite her many responsibilities, she is always responsive, approachable, and ready to help junior colleagues. Her commitment to the professional development of new academics deserves recognition."

"She's been an outstanding research leader for a long time, and continues to grow from strength to strength in research excellence, particularly in the last year. She leads the Centre for Human-Computer Interaction Design, which is a world-leading centre in HCI."

"She is a champion of diversity and inclusion in everything she does, including the research itself and the research environment, for example by contributing to the new Women++ initiative."

Congratulations Steph!!! A winner on and off the badminton court.



Centre Co-Directors (2023) Stephanie Wilson and Alex Taylor thrash it out on the badminton court



Stephanie Wilson being awarded the Dean's Award for Research Excellence, by Professor Rajkumar Roy, Executive Dean of the School of Science and Technology

Book Launch and Symposium Designing More-than-Human Smart Cities

Sara Heitlinger

On 19th June 2024, HCID hosted a oneday event at City St George's to mark the publication of the book, *Designing More-than-Human Smart Cities – Beyond Sustainability, Towards Cohabitation*, coedited by Sara Heitlinger (HCID), Marcus Foth (QUT) and Rachel Clarke (UAL) and published by Oxford University Press.

The event brought together eleven speakers from academia, industry and the third sector to present chapters from the book and discuss the latest interdisciplinary research and insights on designing smart cities beyond human-centric approaches. Speakers included Clara Mancini (Open University), Bill Gaver (Northumbria University), Lauren Davies (Arup), and Jess Massucco (Natural History Museum) amongst others. The event also marked the start of the four year UKRI Future Leaders Fellowship on More-than-Human Sustainable and Inclusive Smart Cities, awarded to Sara Heitlinger and hosted in HCID.

Video recordings of the talks can be viewed at this website:

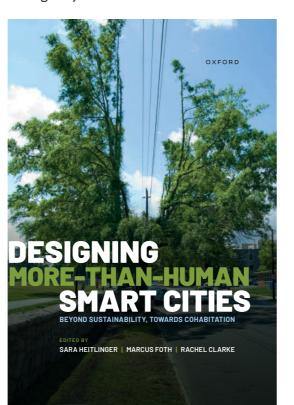
A write-up of the event can be read here:





About the book

Climate change, rapid urbanisation, pandemics, as well as innovations in technologies such as blockchain, AI and IoT are all impacting urban space. One response to such changes has been to make cities ecologically sustainable and 'smart'.



Heitlinger, Sara, Marcus Foth, and Rachel Clarke, eds. Designing More-than-Human Smart Cities: Beyond Sustainability, Towards Cohabitation. Oxford University Press, 2024. https://doi.org/10.1093/9780191980060.001.0001 In *Designing More-than-Human Smart Cities*, renowned researchers and practitioners from urban planning, architecture, environmental humanities, geography, design, arts, and computing critically explore smart cities beyond a human-centred approach. This is in response to a growing awareness that a human-centred notion of cities, in which urban space is designed for, and inhabited by humans only is no longer tenable.

The book's eighteen chapters (divided into four main sections titled Cultures, Practices, Justice and Futures) have been written by leading international authors. Together they present the latest insights on theory, policy and practice (past and present) and speculate on the future of smart cities. The book makes a timely contribution to lively, contemporary scientific and political debates on genuinely sustainable smart cities.

"The various chapters challenge so many perceived ideas of what the world is and can be, and provide exhilarating new perspectives to inspire current and future generations of planners, designers and data scientists." (Anonymous reviewer)



Chapter authors at the book launch. Front row: Sara Heitlinger, Rachel Clarke, Marcus Foth. Back row: Clara Mancini, Lara Houston, Alison Powell, Alex Taylor, Bill Gaver

More-than-Human Smart Decision-Making in Water Policy

Sara Heitlinger

In 2023, I ran a small research project funded through City St George's Policy Support Fund. My aim was to kickstart a collaboration with policymakers and extend the more-thanhuman Live Action Roleplay (LARP) research method I have been developing as a way to investigate the future of computation and data in decision-making for urban rivers.

I ran a full-day workshop by the River Lea in East London with collaborators Ruth Catlow from Furtherfield, Phil Tovey, Head of Defra Futures, Izzy Bishop, a water ecologist from UCL, Lara Houston, a sociologist from Anglia Ruskin University, and artist Julie Freeman, along with eleven participants from government, industry, academia, civil society and the third sector.

In the morning, we walked along the River Lea to sensitise ourselves to the river environment. After lunch, we roleplayed different human characters (a government scientific officer, CEO of an AI technology company, housing developer, GP, water campaigner, data scientist, environmental charity officer, water company representative and citizen scientist) as well as non-human characters (carp, mayfly, otter, green algae and a boat). Informed by news stories as well as the knowledge of our expert collaborators, we introduced a future scenario: fish kills as a result of a pollution event. We then deliberated around this scenario, in role, as a way to better

understand how emerging

The River Lea



Workshop participants next to the River Lea

technologies and data could be harnessed in the future of decision-making in urban rivers, and in ways that take into account conflicting more-than-human needs.

I was able to draw on early insights and demonstrate proof of concept for the creative methods when I was invited to interview for my Future Leaders Fellowship (which was subsequently awarded).

"The collaboration with City and Furtherfield has been fantastic....We [will] be able to ... use this knowledge across different sectors [and] disciplines, integrating different technology and science actors.... and start to build interdisciplinarity into what we're doing, to support the Plan for Water and other innovations that Government are currently trying to lead." (Phil Tovey, Head of Futures, Defra)

A film about the project can be viewed here:



Longitude Prize on Dementia

Stephanie Wilson

The Centre for HCI Design (HCID) is participating as part of a semi-finalist team in the Longitude Prize on Dementia (LPoD), together with software company Memory Lane Games and colleagues in Computer Science at City St George's. The goal of the LoPD is to drive the creation of technologies that will enable people living with dementia to live independent, fulfilled lives. The team's innovation is to deliver an AIenabled, personalised, digital reminiscence platform, a development of the existing Memory Lane Games platform. The platform offers a rich selection of games to support social engagement and reminiscence.

The team (which consists of Stephanie Wilson and Inemesit Emmanuel from HCID. Chris Child and Tillman Weyde from the Computer Science department, and Ian Gibbs from Research and Enterprise at City St George's) has undertaken co-design and usability testing activities with people living with dementia and their companions. These highly collaborative activities explored an app-based version of the platform, a basic web-based version of the platform and an enhanced web-based version where artificial intelligence (AI) had been introduced to adjust the level of difficulty of games. Sessions delivered findings that will be used to enhance the user experience in future versions of the platform. These findings demonstrated that the platform supports people living with dementia in reminiscing and revealed subtle complexities in dynamically adjusting the difficulty of games.

Co-Designing Digital Financial Services for Money-Minding with Family Carers Belén Barros-Pena

All our financial technologies are designed under the assumption that your money is just yours, and that you manage your personal finances individually and without the involvement of anyone else. This assumption is incorrect: have you ever handed your bank card to someone else to quickly pay for something or to withdraw some money on your behalf? Have you ever logged into someone else's online banking to help them pay a bill or transfer some money? I certainly have, and according to the Money and Mental Health Policy Institute, so have millions of other people in the UK¹. Although we all do these things, they are considered fraudulent behaviour, and they are explicitly forbidden by our banks' terms and conditions. When we do them, we are essentially cheating our banks. I call this "everyday financial hacking."

The biggest everyday financial hackers are informal carers: people who take care of someone else without getting paid for such work². Minding money is a common caregiving task that includes mundane activities such as withdrawing cash or paying bills as well as more complex long-term financial management³. Taking care of someone else's money is a common use case that is wholly unsupported by our existing banking services and technologies.

To better understand the money-minding needs of informal carers, myself and research assistant, Iriani Binti Amirudin, worked with them through a speculative and participatory design activity called the "magic machines workshop"⁴. After a short interview, participants identified their biggest frustration with money minding and crafted an imaginary object that would magically address their problem. These "magic money machines" reveal the challenges, anxieties and fears of informal carers who engage in the intimate and deeply humane act of helping others to manage their finances.



The "Jargon Decomplexer", a contraption that translates financial jargon into plain English. This participant was concerned about the need to understand and explain complex financial concepts to those he cared for.

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The "Reassurance Box", a machine to support the participant's caree during mental health crises. This participant had to withstand and handle accusations of financial misconduct from her caree during manic mental health episodes.

Doctoral Consortium at Designing Interactive Systems Conference

Designing Human Technologies Summer School

First International Workshop on Webcomics and/as Hypertext

PhD Profiles

Doctoral Consortium Designing Interactive Systems Conference

Larisa Blazic

I am a PhD researcher in my third year at the Centre for HCID, a journey that has been filled with intellectual stimulation and community support. Exploring how to meaningfully impact the way we think about and make technology has been both a challenging and rewarding experience.

The interdisciplinary nature of HCID allows me to explore diverse topics and a wide range of unconventional approaches to interaction design research. For example, my research is rooted in feminist scholarship that explores how collaborative and cooperative funding platforms may be co-designed and developed to enable grassroots resource and asset management for collective benefit in fair, inclusive, sustainable, and accountable ways.

Another significant positive is the support network within HCID's community. Advisors and peers are not only highly collaborative but also offer an abundance of constructive feedback and encouragement through a range of activities, including but not limited to weekly research group meetings and wonderful annual picnics that help build bonds of friendship between us.

As part of my academic activities, I recently participated in my first doctoral consortium at the ACM Conference on Designing Interactive Systems 2024 (DIS24). The experience broadened my outlook and built my confidence. It provided a platform to share my research with seasoned academics and fellow PhD candidates, receiving feedback that has already helped to refine my work. The DIS24 conference exposed me to the latest trends and breakthroughs in the field. The connections I made there have opened up new avenues for collaboration. It also resulted in my first publication in an ACM venue.

The support from HCID was instrumental in these experiences. From helpful conversations about my conference contribution to presentation rehearsals, my supervisors and the group ensured I could make the most of this opportunity.



Larisa Blazic (left), together with her PhD supervisor, Sara Heitlinger (centre), and Beatrice Vincenzi (right), PhD in HCID alumni

Designing Human Technologies Summer School

Helena Lyhme

Despite being only a few months into my PhD, I got the chance to participate in the tenth iteration of the Designing Human Technologies Summer School, hosted this year by the University of Trento. The summer school aims to bring together researchers from different backgrounds and at different stages of their research who share a common interest, who all share a common interest in Participatory Design: research or design projects conducted in close collaboration with users, citizens, or other external stakeholders.

We all met in a remote house in the Italian Alps with a limited internet connection and surrounded by beautiful nature. People arrived from universities across Europe (some even beyond).

This was the first event I attended as a PhD researcher, and it was a fantastic chance to meet fellow students who are — or were — facing challenges similar to mine. I presented a draft of an exploratory study from my PhD research on co-creating financial technologies with autistic adults.

In the spirit of applying participatory methods, each student presented another student's work instead of their own. Getting this sort of outside perspective on my writing helped clarify things left unclear due to my assumptions and I got to critically engage with the others' work. Apart from the valuable discussions, this experience gave us a community that will stay connected beyond just these few days. I am grateful to everyone who made this such an enjoyable time!



Participants and organisers of the summer DHT10.0



View of the Italian Alps from outside the DHT10.0 venue

First International Workshop on Webcomics and/as Hypertext

Linda Berube

In September 2023, I attended the 34th ACM Conference on Hypertext and Social Media (HT'23) in Rome, Italy. The theme for the conference was "Humanity Within." Together with Francesca Benatti, Research Fellow in Digital Humanities at the Open University, and my HCID supervisor, Ernesto Priego, I organised the first Web/ Comics workshop and presented a position paper, "Hovering Hypertext! Comics Readers Interacting and Having Fun." The workshop was a a reminder of webcomics' fundamental role in the field of hypertext. Participants at the workshop were invited to think about webcomics in conjunction with hypertext systems, cognitive processing, emerging formats, transmedia, user interface, reading and authoring as hypertext, and interdisciplinary research.

Our workshop included submissions from diverse papers related to webcomics, including documenting war in the Ukraine, meaning-making and interactive comics, and hypercomics. Workshop organisers Francesca and Ernesto spoke respectively about researching webcomics and their historical context.

The papers provoked spirited discussions, including my own, which was the only one presenting empirical research including HCI methods. The response to this first workshop was so enthusiastic that Francesca, Ernesto, and I are organising a Second International Web/Comics workshop on "Creativity in Small Spaces" for HT'24 in Poznan, Poland.

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Publications (selected)

Overview

Virtual Reality Design and Development

Creativity in Design

Evaluating Interactive Systems

Design Justice

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Student Profiles

Graduate Profiles

City Interaction Lab

Teaching Highlights

Overview

Belén Barros Pena, Tracey Booth & Sara Heitlinger

The MSc Human-Computer Interaction Design (originally titled MSc in Human-Centred Systems) is one of the most successful and longest-running HCI/UX programmes in the UK. The programme focuses on designing and evaluating technologies for user experience (UX), usability, inclusivity and social and environmental good. Despite challenges across the sector, we continue to recruit excellent students from very diverse cultural and educational backgrounds, which significantly enhances the students' experiences. We have one of our largest ever cohorts predicted for 2024-2025. The continued success of the MSc HCID programme is due to its excellent and innovative teaching and leadership, provision of specialist modules, and project supervision.

In addition to the excellent content provided by HCID teaching staff, students in 2023-2024 have also had the opportunity to attend talks by Adam Foster from Deloitte Digital ("Life & Design as a professional designer"), Rajiv Arjan from Google ("Breaking bias - Building products for the next billion users"), Simone Stumpf from Glasgow University ("Responsible AI – getting the human back into AI development"), Nina Cutler from PolicyLab ("Design in Policy"), Richard Banks from Microsoft Research ("Creativity in Research"), Tobias Revell and Lauren Davies from Arup ("Creative practice at Arup"), Victoria Bordanchuk from Marlin Equity Partners ("From user Research to Executive Board"), Paul Rissen from Alzheimer's Society ("The Future of Information Architecture"), Dave Grayson and Aaron Howes from Fluent Interaction, Martijn van der Heijden and Sabrina Beall from the Listening Lab at Diabetes UK and senior UX

specialist Rebeca Miranda, amongst others. Students were also invited to our regular research seminar series.

Throughout the 2023-2024 academic year, students were given opportunities to develop their UX research and design skills, gain practical hands-on experience, and be exposed to industry professionals. For example, individual portfolio feedback was provided by Adam Foster and his team at Deloitte Digital. Students were given early feedback on projects from Richard Banks from Microsoft Research and Angela Kounkou from Thomson Reuters Foundation. Students addressed project briefs developed in collaboration with external organisations and presented back to these organisations, including: Spitalfields City Farm, Royal Ballet and Opera, London Natural History Society and Diabetes UK.

Paid part-time work experience

opportunities included working on funded research projects, social media work, and user-testing work in the City Interaction Lab with consultant companies. The Listening Lab at Diabetes UK offered one day of work experience to an MSc HCID student, (and are keen to develop their relationship with HCID). Students also had the opportunity to conduct their dissertation projects in collaboration with national charity Sustrans and to be co-supervised by Richard Banks from Microsoft Research.

In addition, we organised a number of social events for students and alumni that gave current students an opportunity to network with graduates now working in industry. This network of alumni is incredibly valuable for our students, especially in light of the 100% employment rate for our recent graduates (according to our employability surveys). We also have an alumni group on LinkedIn where news and opportunities are shared.

We are incredibly proud of our students who put so much into their studies, and get so much out of it. The quality of their dissertation projects is outstanding. In 2022-23, MSc HCID students India Semper-Hughes and Nur Iriani Atiqah Binti Amirudin were awarded the Department of Computer Science Outstanding Project Award. In 2024 the same honour was awarded to MSc HCID student Karl-Simon Tonna. Also in 2024, MSc HCID student Inemesit Emmanuel was chosen to be the Student Speaker at the graduation ceremony.

"The programme is an excellent basis for professional practice or subsequent PhD research. For professional practice competence development, this may be the strongest MSc in the UK."

(Gilbert Cockton, External Examiner)



Guest speakers Lauren Davies and Tobias Revell from Arup talking about speculative design



MSc HCID students at graduation at the Barbican, January 2024, with HCID lecturers, Tracey Booth (left) and Sylwia Frankowska-Takhari (right). Image credit: City St George's, University of London

Virtual Reality Design and Development

Stuart Scott

I have had the pleasure of creating and delivering the recently introduced HCID elective module Virtual Reality Design and Development. This module was produced as a response to the opportunities offered by immersive technologies (e.g., virtual reality (VR), augmented reality (AR), mixed reality (MR) and extended reality (XR)) and address the need for HCID students to learn how to design for these technologies.

In the module, students are provided with a brief and guided through the process of creating their own immersive experience from initial concept to playable prototype. The brief is left purposely broad to allow for creative expression. Throughout the module, students are introduced to key theories around designing for VR, focusing on where it offers the most value and how it differs to other mediums. This theory is complemented with practical techniques (e.g., 360 sketching, physical prototyping and "brown-boxing," where students build a real-world-scale prototype for a VR experience using cardboard boxes) to communicate designs before development begins.

To allow students to realise their designs, they gain hands-on experience with VR hardware and are taught the fundamentals of VR development using a leading game engine. Sessions are taught in City St George's AR/VR Learning Centre.

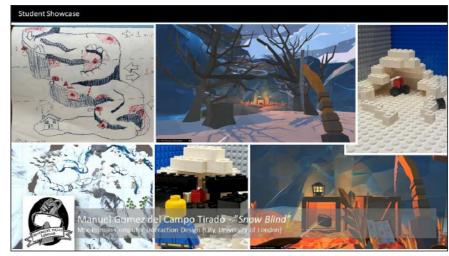
This module is jointly run with students from MSc Computer Games Technology with Virtual Reality. The module offers HCID students the unique opportunity to network, collaborate and share knowledge with peers from a complementary discipline. Alongside VR, the module aims to explore related topics such as AR, MR, motion capture and virtual production, offering hands-on experience in these areas.

In its first year (2023-2024), students were given a coursework brief titled "Cultural Immersion." Students were required to create cultural experiences informed by museums, galleries and cultural events. Each student approached the brief differently with topics including roman gladiators, the stories of Enid Blyton, and Britain's Home Front during World War 2.

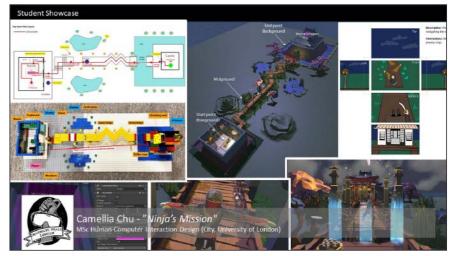
Students were enthusiastic about learning how to design and tell stories in this exciting new medium. Their final projects were showcased ahead of a panel session at the inaugural Immersive Rally London meet-up organised by myself and hosted at City St George's in June 2024.



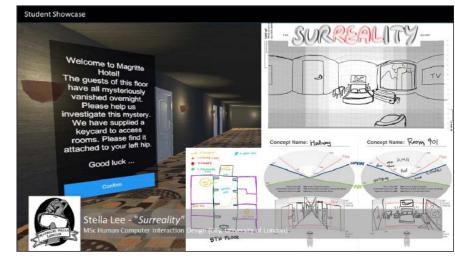
Immersive Rally London



Manuel Gomez del Campo Tirado - "Snow Blind"



Camellia Chu - "Ninja's Mission"



Stella Lee - "Surreality"

Creativity in Design

Sara Heitlinger

This year, Creativity in Design students were given a design brief: to work with Spitalfields City Farm in East London in response to the proposal *What else could a smart city be?* In three site visits to the farm, students were able to apply techniques learnt in class in a real-world setting. In the first visit, students were given an introduction to the farm and tour by the manager, Phil Nichols. Students then designed and led workshop activities at the farm to learn about its values, challenges and hopes with participants from staff, volunteers and visitors. In the final week, students presented their group projects: design proposals for the future of the farm.

Students learnt different creative and participatory design skills, supported by guest lectures. Sylwia Frankowska-Takhari taught "Lego Serious Play" (described by



Students meeting some of the farm community



Students working on a 3D laser-cut bird-house design

one student as "life-changing") and photovoice techniques. Students learnt 3D digital design, including an introduction to CAD design, 3D printing and laser cutting, as well as physical computing and Arduino. Guests also included Nina Cutler from Policy Lab UK, Richard Banks from Microsoft Research, and Lauren Davies and Tobias Revell from Arup, who demonstrated how these speculative and participatory techniques are used in industry and government. Richard Banks also provided feedback to each group on their coursework.

"I strongly believe that participatory methods represent the future of research and design processes, and this course has reinforced that belief. The classes were incredibly engaging, igniting my creative thinking and expanding my knowledge. They have also fueled my motivation to pursue further opportunities in my career. Overall, it has been an enriching experience that has left a lasting impression on me." (anonymous student feedback)

Evaluating Interactive Systems

Steph Wilson

Students in the 2023-24 cohort had the opportunity to undertake a usability and UX evaluation in response to a brief developed in collaboration with an external organisation, an activity that is now a regular feature of the MSc HCI Design. This year's organisations were Diabetes UK, the Royal Ballet and Opera and the London Natural History Society. Findings were shared with the organisations. This activity formed part of the assessment for the Evaluating Interactive Systems module and provided the students with the opportunity to develop a portfolio piece that tackled a genuine UX challenge.

"Last week, my classmates and I had the incredible opportunity to present our MSc coursework in the Evaluating Interactive Systems to the IT team at the Royal Ballet and Opera.

"This experience was invaluable, providing us with a platform to showcase our hard work and practice, and our presentation skills, particularly in presenting our usability testing findings. Receiving feedback from industry professionals was enlightening,



MSc Students and Tracey Booth at the Royal Opera House where they presented their work

offering me insights into how listeners perceive and process presentations, and guiding us on how to effectively present key information. This feedback will definitely shape my future presentations.

"A huge thank you to our professors Stephanie Wilson and Tracey Booth for their guidance and support for helping us prepare for this presentation." (Camellia Chu)

"Presenting to the Digital Team at the Royal Ballet and Opera was both nerve-wracking and exciting — kind of like being on stage for the first time. It was a fantastic practice run for future projects. The feedback and the discussion afterward were especially insightful. Huge thanks to our professors, Stephanie Wilson and Tracey Booth, for their guidance."

(Suhani Yadav)



MSc HCID student, Camellia Chu presenting the results from usability testing of the Royal Opera House's website to the IT team 41

Design Justice

Ernesto Priego

As technology enters all aspects of our lives, designers are faced with an ever-increasing array of ethical and social challenges. Technology is increasingly amplifying existing inequalities and injustices such as racist and sexist discrimination through new algorithms, social media, and machine learning, as well as contributing to environmental destruction through energyconsuming computational systems.

Design Justice is a new module, started in 2022, that provides students with an opportunity to explore and acquire the knowledge and skills to conduct design that is led by justice. Students learn about a growing body of design research that is responding to the challenges we face as a species on a finite planet and engage with themes of environmental sustainability, fairness, equality and social cohesion. Students are introduced to frameworks, approaches, perspectives, methods and tools from design that: a) critically examine the ways in which design harms people and the planet, and b) reposition design towards justice, sustainability, fairness and equality.

This year (2023-2024), as part of the final coursework, students were asked to create a zine that describes a Design Justice case study of technology of their choosing. A zine (short for magazine or fanzine - pronounced "zeen") is usually a low-cost, self-made publication that can showcase anything. Zines can be traced back to science fiction fans in the 1950s, the British punk movement of the 1970s and DIY and indie subcultures of the 1990s. The module also introduced students to Creative Commons licensing and different open access repositories.

Students used lo-fi and digital methods and engaged critically with generative AI tools. Each zine was submitted as a physical paper copy, and were also deposited on figshare as PDF files for archiving, sharing, feedback and citation.

I have started a public collection on the Figshare open access repository to document, archive and share a selection of the zines students produced as coursework for the module, starting with the 2023-2024 cohort. My hope is to add new items to this collection over time, and that it becomes a useful resource for others at City St George's and elsewhere.

These are student learning outputs, and as zines they are by definition expressions of personal creativity and disruption, and thus should be treated accordingly.

Priego, Ernesto; Calzavara, Teresa; Malinowska, Katarzyna; Shaikh, Maleehatazzin; Pasquot, Chiara; Wong, Finn; et al. (2024). INM317 Design Justice Student Coursework Zine Collection (HCID; City, University of London). figshare. Collection. https://doi. org/10.6084/m9.figshare.c.7270651

"Thank you so much, Ernesto, for leading us into a world full of new knowledge, ideas and value-sensitive thoughts that help us further our careers as we go on to become ethical technologists and designers of tomorrow. Your class has been an amazing experience." (Maleeha Shaikh)

Teaching Profile: Tracey Booth

Sara Heitlinger

Tracey Booth completed an MSc HCID in 2012, after which she became a Research Fellow in the Centre, working on the awardwinning EVA Park project. She went on to do a part-time PhD, with a topic inspired by her MSc dissertation, which researched the potential benefits of visual (graphical) programming environments for novice enduser developers programming Arduino. She published well-cited scholarly papers from her PhD research including at ACM CHI, the premier venue for HCI research.

After being involved in teaching during her PhD, Tracey became a full-time Lecturer on the MSc programme in 2022, delighting students with her passion and knowledge. She has taught across a range of modules including Interaction Design, Evaluating Interactive Systems, Information Architecture, Creativity in Design and User-Centred System Design. She also supervises dissertation projects, providing the highest quality of care and support throughout. Tracey consistently gets extremely high scores in her student evaluations.

Here is some recent (anonymous) feedback: "This was my favourite lecture this semester especially due to Tracey's engaging teaching style, [she] goes above and beyond to support me especially as I am part-time and have additional responsibilities outside of uni. Thank you Tracey :)"

"Tracey is extremely personable and has a good sense of humour – even on a bad day Tracey will get you engaged."

"Tracey has been so helpful in helping me critique my design decisions as well as other

theories. You are the best!" "Amazing lecturer, so friendly, actually tries to make it fun and interactive"

This year, Tracey's unwavering dedication to students and teaching were recognised with a nomination for a Staff Excellence Award for excellence in teaching and learning in the School of Science and Technology. The panel stated that Tracey is, *"A force of nature, focused on providing students with the best learning experience possible. She approaches every module with passion and drive."*

In 2024, Tracey took on a substantial leadership role, becoming Programme Co-Director of the MSc HCID. With her extensive knowledge of the MSc and dedication to ensuring all students have a positive experience, Tracey is perfect for this role. She also organises the successful HCID social events for current students and alumni, which have helped to build the cohort community, and contribute to positive student experience and networking opportunities.



Tracey Booth at the 2024 graduation ceremony with MSc HCID student, Krishnendu Sudarsanan



Teach-out for MSc HCID students during the 2023 UCU industrial action, led by HCID staff



Student Profiles

Trushant Narwani

I've always been curious about what drives people's reactions to designs, and the MSc HCID programme at City St George's has sharpened my understanding of that. Living in London has been nothing short of amazing – each day feels like a new cultural discovery. Connecting with industry networks through seminars, guest lectures, and alumni events has been invaluable. For example, a guest seminar by designers Tobias Revell and Lauren Davies from the sustainable development consultancy Arup, on speculative design introduced me to creative forward-thinking approaches in UX, while a session by Paul Rissen product lead at the Alzheimer's Society, highlighted the importance of good information architecture in creating effective user experiences.

The tutorials were absolute lifesavers, guiding me through coursework and making complex concepts click. The coursework was not just theory; we tackled real-world challenges, which gave me the hands-on experience I was after. I cannot forget my fantastic teachers and my dissertation supervisor who were always there to help and push me to do my best.

This course has made me much more aware of how users think and behave, setting me up to take on UX roles with confidence. It pushed me out of my comfort zone, so I now feel ready for what the industry expects. The MSc HCID has nailed the balance between research and design.

Maleehatazzin Shaikh

I was born and raised in India, and moved to Australia for my double Bachelor's in Information Technology (Networks and Security) and Business (Marketing). The MSc HCID programme helped me to find my professional strengths and interests and to build a strong network of people and opportunities around me.

Academically, the projects I have undertaken have been challenging yet interesting. For Information Architecture, I chose to build a jewellery information-site and having that flexibility to pursue a personal interest in a professional context, made me aware of where I can shine in the field and how I could keep myself motivated to deliver projects. I have also had the opportunity to work alongside my studies part-time as a Student Digital Assistant and content creator for the School of Science and Technology's marketing team. I absolutely love my peers, and we all make one strong cohort, helping each other and growing together. Being elected as a Student Representative in the cohort has also helped me gain experience in leadership. I thoroughly enjoyed social events and guest lectures arranged by our faculties, where I got to meet expert professionals in the UX/UI field and get a get to have one-onone chats about their experiences.

Students learning to plant seeds during the HCID teach-out run by HCID staff in 2023

Graduate Profiles

Inemesit Emmanuel

My name is Inemesit Emmanuel from Akwa Ibom State, Nigeria. My journey into the field of Human-Computer Interaction began during my undergraduate studies in Computer Science at the University of East London, where I wanted to build a discussion forum for residential students as my final year project. To create something students would actually use and would make their lives easier, I started by interviewing them as I wanted to understand their true needs and preferences for a discussion forum. It was during these conversations that I realised how much I enjoyed the process of gathering user feedback. This was more than just coding, it was about understanding people and designing a solution that truly met their needs. With the insights from those interviews, I sketched out wireframes for the forum. That experience - the back-and-forth between understanding user needs, designing and developing - made me fall in love with the entire process.

After that project, I knew I wanted to explore this intersection of technology and human behaviour further. I started digging into UX and stumbled across the Masters in Human-Computer Interaction Design at City, University of London. The more I read about the programme, the more it felt like the perfect next step for me, so, I applied and got accepted. What I loved most about the programme was that the courses we were taught had a perfect blend of deep, theoretical understanding and hands-on application. We were not just learning about design principles or

research methods in a vacuum; we were constantly applying these concepts to realworld problems, which made the learning experience dynamic and engaging. When it was time to choose a dissertation topic, I selected one that was close to my heart: TikTok algorithm bias and its impact on Black users. This was an eye-opener as I explored how algorithms, which are often seen as neutral and objective, can actually perpetuate biases, particularly against marginalised groups. I conducted controlled simulations on TikTok, alongside interviews with Black TikTok users to gather their experiences and perspectives, and the findings were both enlightening and troubling.

This dissertation not only deepened my understanding of algorithmic bias but also strengthened my dedication to ethical design and advocating for fairness in technology. In my graduation speech as the student speaker, I emphasised the importance of ethical considerations in the technology we create and encouraged my fellow graduates to uphold the principles of inclusivity and fairness that the HCID programme has instilled in me. It was a true honor to inspire others to carry forward these essential values in their future careers.

Since graduating in January 2024, I have been working as a User Researcher at City University and have had the opportunity to contribute to high-impact projects such as the Longitude Prize for Dementia in partnership with Memory Lane Games. This project involved working with people living with dementia to develop a game that integrates AI to adapt to each user's needs while supporting their memory and cognitive function. Currently, I am working on another project to redesign the university's website. The goal is to streamline the application process and enhance the overall user experience for future and current students. Looking forward, I am committed to advancing in the field of user experience design, focusing on creating technologies that are both accessible and inclusive. My HCID experience has provided me with a deep understanding of user needs and ethical design practices, which are crucial as I strive to develop technology that not only meets user expectations but also effectively addresses their broader needs and challenges.



Inemesit Emmanuel giving her Student Speech at the 2024 graduation ceremony

Nihal Noushad

Paula Malinowska

I've officially graduated from the Master of Science programme in Human-Computer Interaction Design at City St George's, University of London. This achievement marks one of the most significant milestones in my life, blending my software development background with my newfound passion for UX.

This academic adventure has been nothing short of transformative. It was a deep dive into understanding the nuances of human behaviour and technology, equipping me with the skills to create intuitive and impactful digital experiences. From user research to interface prototyping, and from inclusive design to advocating for design justice, every aspect of this curriculum has been immensely enriching. I had the privilege of collaborating on various projects with incredibly talented peers, and I am grateful for the guidance and support of my professors Sylwia Frankowska-Takhari, Tracey Booth, Stuart Scott, Alex Taylor, Pete Goodman and Ernesto Priego. "Thank you" goes to my project supervisor, Andrew MacFarlane, for his invaluable mentorship. The inspiring environment at City St George's, University of London has played a crucial role in my growth.

This graduation is not just the end of my academic journey but a significant milestone that opens the door to an exciting career in UX. I am eager to dive into the world of UX, tackle real-world challenges and contribute to creating meaningful, user-centric designs.



MSc HCID students at graduation, 2024, with Tracey Booth

Coming from an Information Technology background, I chose the MSc HCID program for its strong focus on user research and design, which aligned perfectly with my career goals. The program exceeded my expectations, offering both rigorous academic challenges and opportunities for real-world application.

The exceptional support from the faculty and the collaborative environment with peers were also instrumental in helping me navigate my study journey. One of the highlights for me was the Creativity in Design module, which provided invaluable knowledge and expertise in creative participatory design. I directly applied these skills in my final year project.

Earning the MSc HCID has significantly advanced my career, equipping me with technical expertise and expanding my professional network. This has led to excellent career opportunities and rapid progression. The skills and knowledge I gained have been directly applicable in my work, making a tangible impact.

I'm truly grateful for the experience and growth I achieved through this program.

City Interaction Lab HCID's UX Consultancy

Stuart Scott

City Interaction Lab is a user experience (UX) consultancy based within the Centre for Human-Computer Interaction Design at City St George's, University of London. Established in 2006, the Interaction Lab offers UX consultancy, training and facilities hire. We have collaborated with organisations of all sizes, including BBC, The AA, Virgin Atlantic Airlines and Cancer Research UK.

As a university consultancy, our focus is not on turning a massive profit or launching the latest design craze. Instead, we aim to provide students on the MSc HCID programme with commercial work experience opportunities. Student consultants work on real-world challenges for external clients, and thus benefit from applying the skills they learn on the programme into practice. At the same time, clients benefit from the enthusiasm and fresh perspectives our student consultants bring to projects.

Previous student consultants have progressed to work for UX consultancies including Deloitte, Foolproof, Bunnyfoot and Fluent Interaction, and client-side organisations including Google, IBM, The Guardian, AstraZeneca and Nintendo.

Our consultancy work is facilitated by a purpose-built 75m2 user testing facility capable of evaluating websites, apps, smart devices such as TVs and speakers, as well as computer games, XR experience and robots. Our unique combination of future UX talent and a dedicated UX facility means that the Interaction Lab at City St George's can support organisations of all sizes and budgets in designing better products for their users through the strategic application of user experience techniques. Being based within a university, we are also in the unique position of being able to bring cutting-edge academic research and teaching expertise from within HCID to our commercial clients.

To learn how the Interaction Lab can support your organisation whilst offering our students valuable work experience opportunities, please contact the Interaction Lab manager Stuart Scott: (stuart.scott.2@city.ac.uk) www.interaction-lab.co.uk



Students running a mobile user testing study in the Interaction Lab



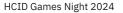
Students running a UX workshop in the Interaction Lab

The Social Life of HCID

HCIDers are a friendly bunch. We regularly organise social activities and enjoy hanging out together. The HCID kitchen is a focal point for our social interactions throughout the working day, where we meet over a coffee or lunch together. We often eat and drink together and chat about work and the wider world.

We also organise regular social activities. Recent gatherings have included a games night at a local games cafe, a number of dinners at local restaurants, a Christmas party and a summer picnic for current and past members who like to stay in touch. We also sometimes play badminton together.









HCID members on the picket line as part of the 2023 UCU industrial action



HCID Christmas Party 2023

DIVERSE CDT

UKRI Future Leaders Fellowship

TikTok Misinformation Study

MSc in Data, Policy and Society

Looking Ahead

EPSRC Centre for Doctoral Training in Diversity in Data Visualisation – DIVERSE CDT

DIVERSE CDT is a major new initiative in doctoral training that is being led by HCID and the giCentre at City in collaboration with the University of Warwick. Backed by over £10m of funding from the Engineering and Physical Sciences Research Council (EPSRC), it will provide an innovative programme of bespoke education, applied research and community activity to train sixty PhD students in data visualisation over eight and a half years.

Part of a £1 billion investment in doctoral training made by the UK government, DIVERSE CDT will deliver high-quality doctoral training to address a significant skills gap in the UK workforce and in doctoral level training in data visualisation. It will develop greater diversity in data visualisation researchers and practitioners by making doctoral-level training widely attractive and accessible. This will be achieved through key innovations including internship-based PhDs, interactive digital theses and a strong focus on communities of practice.

DIVERSE CDT is supported by nineteen non-academic partner organisations. These are large and small, commercial and nonprofit, in sectors including healthcare, local government, and finance. They include the Natural History Museum, the Ordnance Survey, British Red Cross, the Stroke Association and the Centre for Applied Education Research. An international exchange programme with leading data visualisation labs will further enrich the doctoral experience.

DIVERSE CDT runs from July 2024 until September 2033 with the first cohort of PhD students joining us in October 2025. We are recruiting new staff to deliver DIVERSE CDT and this significant investment will grow and enrich our PhD programme. Contact Stephanie Wilson (<u>s.m.wilson@city.ac.uk</u>) or Jason Dykes (<u>j.dykes@city.ac.uk</u>) if you would like to know more.

UKRI Future Leaders Fellowship: More-than-Human Sustainable and Inclusive Smart Cities

Dr Sara Heitlinger was awarded UKRI Future Leaders Fellowship to support her More-than-Human Sustainable and Inclusive Smart Cities (MoSaIC) research. The Future Leaders Fellowship grants her £1.6m of funding over four years to support her More-than-Human Sustainable and Inclusive Smart Cities (MoSaIC) research. The fellowship will run from July 2024 to June 2028.

UK Research and Innovation (UKRI) is a nondepartmental public body sponsored by the UK Government's Department for Science, Innovation and Technology (DSIT). Its flagship Future Leaders Fellowships allow universities and businesses to develop their most talented innovators and early career researchers and to attract new people to their organisations, including from overseas.

Dr Heitlinger's Future Leaders Fellowship will allow her to lead a team to investigate the design of more inclusive, sustainable and flourishing smart cities. They will do this by exploring how digital technologies such as networked sensors, AI, and data visualisation approaches can contribute to better planning and design of smart cities for all their inhabitants — human as well as other species.

The research will be undertaken in three living labs, which are real-world testbeds for co-creating research and innovation in public-private-people partnerships. These will take place in three types of sites: urban community gardens, buildings, and waterways. The researchers will co-design new prototypes in the living labs that demonstrate how digital technologies can enable sustainable, more-than-human smart cities in practice and policy and in ways that work for communities.

The research will use inclusive and creative co-design methods and involve close collaboration with key community, business, and policy partners to include the perspectives of human and non-human inhabitants. Partners include the Department for Environment, Food & Rural Affairs, and built environment consultancy, Arup.

The fellowship will be hosted within HCID. Two new postdoctoral research associates and one PhD researcher will join HCID to work on the fellowship project.

Short and sweet?: A participatory study of TikTok users' experiences of health and wellness misinformation in short video format

In collaboration with Dr. Stephanie Alice Baker, Department of Sociology and Criminology at City St George's, Dr. Stephann Makri will be investigating the user experience of health and wellness misinformation on TikTok. Funded by the university's Participatory Research Fund, the research will take a highly participatory approach by directly engaging young (Gen-Z) TikTok users in designing and undertaking research to understand their experiences with false or misleading TikTok videos. During COVID-19, vaccine misinformation was rife on TikTok and, the situation has worsened post pandemic; for example, searches for horse de-wormer 'ivermectin' surface short videos containing false claims

that the product cures everything from colds to cancer. While we know its risks, an understanding of how users experience health misinformation on TikTok is lacking. This project will help gain this understanding through a participatory research approach. Project period: July 2024 - June 2025.

MSc in Data, Policy and Society

We are launching a new MSc in Data, Policy and Society at City St. George's, University of London. This MSc is a unique collaboration between the Sociology and Criminology (City School of Policy and Global Affairs) and the Computer Science Departments (Centre for HCID), providing students with the practical research skills and knowledge to critically understand and ethically assess how data is used across a multitude of industries.

The social and technological are merging in arguably unprecedented ways. Computational, data and AI-centric systems are pervasive in contemporary life, just as the technological capacities for enumeration, modelling and prediction are now entangled with virtually everything from people's daily interactions to political and democratic structures. Not only is computation playing a greater role in online social interaction, it is shaping how publics, industries, practitioners, researchers, and politicians make sense of and act in the world.

The MSc Data, Policy and Society invites a new kind of professional: one both trained in the technicalities of data-centric systems and skilled in the application of social research and critical scholarship. Knowing how to design fairer and more equitable digital technologies and flourishing societies demands both an understanding of how the data and digital technologies operate and the ways that such technologies remediate or enact the social. The MSc Data, Policy and Society is taught by specialists across the social sciences and human-computer interaction. Students will be equipped with a richer critical and ethical understanding of today's computing industry and the social, political, and economic relations it increasingly helps scaffold. This is significant, given the need for tech companies to better understand the social impact of their products and for government bodies to understand the impact of their policies. There is a need, therefore, to employ individuals who understand and can draw on a range of data analysis and research methods that are rooted in sociological knowledge, human-computer interaction, politics and ethics.

This innovative and forward-facing programme will provide students with a range of methodological skills and theoretical insights that can be applied in positions in industry or government such as social policy advisers and qualitative/ quantitative data researchers in government, data-focused think-tanks and NGOs, user experience analyst, data policy adviser, data and reporting analyst, data insight manager, data strategy and performance officer.

The programme will start in September 2025. For registration, visit the programme's website:



For further inquiries, please email ernesto.priego.1@city.ac.uk

Biographies

Centre Directors

Sara Heitlinger is a UKRI Future Leaders Fellow, Senior Lecturer and Co-Director of HCID. She leads the More-than-Human Sustainable and Inclusive Smart Cities (MoSaIC) project. Her research at the intersections of urban sustainability, computation and participatory design draws on methods from the arts and humanities to find ways for co-designing more just and inclusive smart cities.

Stephanie Wilson is Professor of Human-Computer Interaction and Co-Director of HCID. She specialises in co-design and UX research for inclusion and better futures with digital technology. Stephanie is joint lead of the new EPSRC Centre for Doctoral Training in Diversity in Data Visualisation and is on the management board for the new Institute for Creativity and AI at City St George's.

MSc Programme Directors

Belén Barros Pena has worked as an interaction designer and design researcher in the software industry since 2007. She received her PhD in 2021 and is now a Lecturer at HCID. As a researcher, she specialises in financial technologies and in engaging marginalised populations through participatory design practices.

Tracey Booth has been designing and evaluating user-facing applications and interfaces for over two decades. As a Lecturer on the MSc in HCID, she helps to instil a user-centred ethos into new generations of UX researchers and designers. Her main research interests lie in inclusive approaches to making and development and the design of novel and inclusive technologies, with emphasis on a positive user experience.

Ernesto Priego is a Senior Lecturer in HCID. He co-founded and co-edits The Comics Grid: Journal of Comics Scholarship. His research interests include co-design and participatory design practices involving visual storytelling, open access publishing, ethics and material culture in the digital age/age of AI, digital humanities and design justice.

Academic Staff

Andrew MacFarlane is a Reader in Information Retrieval at HCID. His research interests include information retrieval or search technologies and HCI (interactive information retrieval systems), mostly focusing on cognitive impairments such as dyslexia and aphasia.

Tom Stead holds a BSc, MSc and PhD in Design and has extensive experience in interaction design, design research and product development in both industry and academia. His research interests include the HCI implications of the use of digital twins, low-cost sensors, physical and spatial computing, and user interaction in AR/VR/XR.

Stephann Makri is former Co-Director of the Centre for HCI Design and self-proclaimed 'prince of serendip' - based on his research interest in supporting serendipity in Human-Information Interaction. His research involves understanding how people interact with information and using this understanding to inform the design of digital information environments.

Interaction Lab Manager

Stuart Scott is a commercially experienced Design Researcher and Interaction Designer. Acting as Manager / Lead Practitioner at City Interaction Lab, he has run commercial UX activities on behalf of HCID since 2013. Stuart has recently begun exploring new design opportunities offered by the immersive sector (XR, AR, MR, VR).

Visiting Lecturers

Sylwia Frankowska-Takhari is an

inclusive design research practitioner and accessibility expert. She is passionate about making a difference for end users and helping UX teams build innovative and accessible products. Her research incorporates inclusive participatory methods and explores how technology can be used to increase independence and support the well-being of people with disabilities.

Pete Goodman has been working in web development since 2005. He teaches a range of development skills, from beginners learning to code through to complex technical subjects. On the MSc for HCID, he teaches Web Design and Development. He has been involved in every stage of largescale projects, from the initial scoping to delivery and client handover.

PhD Researchers

Linda Berube is a doctoral researcher at HCID. Her AHRC CDP-funded research, in partnership with the British Library, focuses on digital ecosystems, especially as they are formed around the creation, production, and consumption of digital comics. Prior to this research, she has been involved in the design and analysis of web-based user services and collections.

Larisa Blazic is a PhD student at HCID. Her current research explores how collaborative and cooperative funding platforms may be co-designed and developed to enable communities to manage resources for collective benefit in fair, inclusive, sustainable and accountable ways.

Helena Lyhme is a PhD student at HCID. Her research concerns eliciting the expertise of autistic people to co-design new financial technologies in alignment with neurodivergent needs. Helena has previous experience working in the IT industry. Her academic background is in social anthropology and science and technology studies (STS).

Axel Niklasson is a PhD student at HCID. His current research centres on the introduction of AI in team collaboration. Previous to his academic work, Axel enjoyed a twenty year international career in telecom, media and software engineering. He earned his MSc from Lund University, Sweden.

Monica Visani Scozzi has recently joined HCID as a PhD student. Her research focuses on how to support users interacting with conversational Generative AIs, in order to minimise potential harm and maximise benefits. Monica previously worked in the IT industry implementing and deploying solutions, with a passion for data and information, helping others get the most out of systems.

Research Associates and Fellows

Inemesit Emmanuel is currently working with the City Interaction Lab as a user researcher and designer focusing on redesigning the university's website. She recently graduated from the MSc HCID programme. Wyncelia Lieng is a Research Associate with a background in Psychology and a master's degree in Human-Computer Interaction. She is currently working on a KTP project, exploring UX/UI methodologies, gamification, and design friction. Wyncelia is passionate about delivering user-centred and impactful work that aims to create meaningful and accessible experiences for diverse individuals.

Abi Roper is a Research Fellow and a speech and language therapist. She is passionate about technology use within atypical speech and language populations. Her recent work includes the role of researcher coinvestigator on the INCA project investigating how to empower people with aphasia to create, curate and access digital content through innovative technologies.

Honorary Members

Richard Banks is Principal Design Manager for Microsoft Research, studying AI and human cognition. He is honorary Professor of Design at Dundee University and was awarded an Honorary Doctorate by City University by City St George's. A twenty-nine year veteran at Microsoft, he holds over forty patents and papers in a broad range of domains.

Meghan Lambert is an Honorary Visiting Fellow at HCID, and Research Development Specialist at Wellcome. She has a background in visual culture and medical anthropology and a master's degree in the Study of Religions. Meghan's research focuses on the intersections of critical global health, museum anthropology and collaborative visual research.

Tim Neate is a Senior Lecturer in Computer Science at King's College London specialising in accessibility research. Formerly a postdoctoral researcher in HCID, he focuses on co-designing technologies that support people with complex communication needs, particularly in everyday communication, understanding audiovisual media, and healthcare contexts.

Alex Taylor is a Reader in Design Informatics, University of Edinburgh. His research ranges from studies of technology in everyday life to speculative design interventions. He draws on feminist technoscience to ask questions about the roles human-machine composites play in forms of knowing and being, and their possibilities for fundamental transformations in society.



E INTERACTION LAB

