



**BEYOND** **Imagination**  
LANCASTER

**Beyond  
Imagination  
Research project  
Recruitment:**

10 Lecturers

10 Post Doctoral Research Associates

**Lancaster  
University**



## Lancaster University is a world-class centre for excellence in research, teaching and scholarship.

Ranked as a top 10 UK university (in The Times, Guardian and Complete University league tables) and in the top 1% of universities in the world, Lancaster continues to sustain its reputation for teaching and research excellence both nationally and internationally.

The main campus is situated on the southern outskirts of Lancaster and is set in 250 acres of landscaped parkland, close to the lively, friendly and historic city of Lancaster.

The campus is 30 miles south of the Lake District, 20 miles east of the Yorkshire Dales, and even closer to the Forest of Bowland and the Fylde. It is one hour's drive from Manchester and about 2 1/2 hours by train from London.

**Lancaster Institute for the Contemporary Arts (LICA)** encompasses Lancaster's teaching and research activities in Art, Architecture, Design, Film and Theatre. LICA is a vibrant and highly supportive learning environment where a strong research ethos underpins and shapes everything we do. We are committed to leading interdisciplinary and international research in contemporary arts.

We are constantly placed in the top ten of our respective subject league tables in the UK demonstrating our commitment to the quality of our teaching. Our students value the real-world focus that we support through visiting practitioners, placements, projects with external organisations and off site visits. With a strong outward focus and excellent links in the creative sectors students can make the best possible connections with individuals and organisations outside of the University.

We have two research centres in LICA; Insight a creative research centre with disciplinary bases in Fine Art, Theatre, Film, Dance and Sound that focuses on making meaning in the arts; and ImaginationLancaster where the project Beyond Imagination will be based.





■ Leon Cruickshank



■ Rachel Cooper



■ Nick Dunn

**ImaginationLancaster is an open and exploratory design research lab that conducts applied and theoretical research into people, products, places and their interactions. We work with a variety of organisations to provide fresh perspectives on real-world issues and facilitate innovation.**

**ImaginationLancaster** has been established since 2006 is research led with a world leading research team and over 50% of all design students undertaking a PhD programme and cross disciplinary design research. ImaginationLancaster staff have published 40 books, created over 100 design artefacts and 25 exhibitions, and between just 2013-18 we have produced 157 publications of which 10% are in the Top Citation Percentiles, and 19% are in the Top Journal Percentiles. Since 2006 we have secured £55m in research funding.

We have now been successful in our proposal for Beyond Imagination, a new research project to scale up ImaginationLancaster.



**Beyond Imagination Research Project**

Beyond Imagination, a radical £13.2 million 3 year research project, will explore and demonstrate how cutting-edge design research can create a healthier, more prosperous and sustainable world. It will enable ImaginationLancaster to expand its expertise and reach.

Funded by Research England, the bold and engaging Beyond Imagination project will put design research at Lancaster firmly on the global map, transforming the University’s ImaginationLancaster design team with 30 new roles – a significant increase.

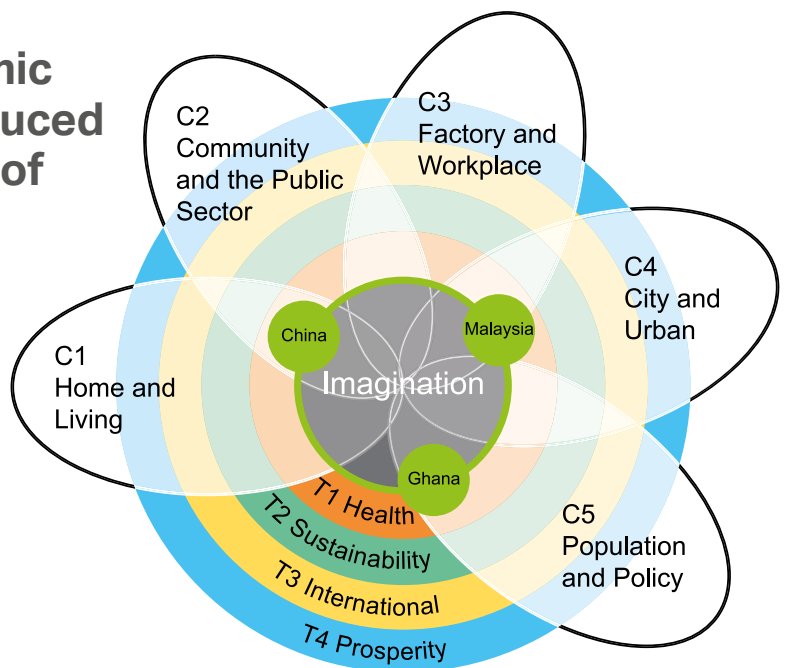
The three-year project will provide fresh perspectives on real world challenges focusing on five key Clusters: home and living; communities and the public sector; factory and workplaces; cities and urban; and population and policy. And four themes sustainability, health, international and prosperity. It will address current global challenges such as Ageing Society, Artificial Intelligence and Data, Clean Growth, Health and Wellbeing - and it will also identify and tackle future emerging challenges.

The expansion of ImaginationLancaster will mean that all areas of design including architectural design are developed, and so feed into the new school of architecture as well as design.

**E3 investment will create a critical mass of new researchers, who will be inducted into the culture of research excellence in ImaginationLancaster. Ten new academics 2 each for the 5 clusters. Ten PDRAs: one placed in each of the clusters and themes with one PDRA dedicated to creative evaluation across the whole project.**

**We will also recruit 10 PhD students (4 years funding) to work within the clusters and themes and 3 support staff (Impact Manager, Visualiser, Admin).**

**Beyond Imagination academic posts have significantly reduced teaching in the first 3 years of these permanent posts. In the first year successful applicants will have only 10% of the normal teaching load with an gradual increase to 30% of a normal teaching load in year 3.**



# Home and Living

## Lead: Professor Paul Coulton (+ Cureton, Dunn, Richards)

This cluster will focus on the future of homes and seek to address questions such as: what will our future homes look like? how will they function? and what will it be like to live in them?

Research activities are expected to cover both the possible changes in how we live i.e. greater density, intergenerational living, mobility, etc., how homes are built in term of greater sustainability and new construction techniques, and how the introduction of new technologies into our homes will change the way we live.

In particular, we are interested in more-than-human approaches that move beyond current anthropocentric dominance to include the independent and interdependent perspectives of the non-human participants in these network ecologies of future homes such as climate change, materials, infrastructure, other species, algorithms, data, etc.

### Lecturer: Smart Home Futures

We are seeking an individual with a background that can address both the technical and social aspects relating to our potential futures in homes where technology will play an increasing role. This is likely to include greater interactions through VR/AR and voice interfaces and increasing amounts of automated sensing and control systems related to the internet of things.

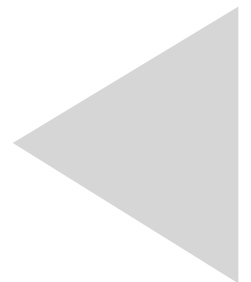
As these technologies will increase the datafication of our homes and with the introduction of AI and ML other considerations will include data legibility, the agency of users, and how they can negotiate the transaction of data for functionality.

*Keywords: Smart Homes, Artificial Intelligence, Machine Learning, IoT, Interfaces*

### Lecturer: Future Living

The post holder will work on envisioning 21st century living reflecting changes in the environmental, economic and social factors, such as mega/micro commuting patterns, the decrease in dormitory suburbs, and reformulation of home/work environments including practical concerns such as housing regulations. These will drive the architectural agendas that will influence the design of future homes. In particular we are interested in candidates who can practically address these challenges through the creation of innovative domestic environments that consider new forms of materials, spaces, and contexts and/or experimental approaches to construction such as the use of organic substrates.

*Keywords: Futures, Domestic Architecture, Materiality, Urban Planning*



# Community and Public Sector

**Lead: Professor Leon Cruickshank (+ Rodgers, Tseklevs, Whitham)**

The Community and Public Sector cluster will focus on working collaboratively with people outside the academic context to address real world issues. It will explore how to enable communities to be more creative and innovative.

Communities in this context could include from grassroots organisations, communities of practice, experts by experience, business groups, cared for young people to public health workers amongst many others. In all of these cases activating communities and helping them have a greater capacity and capability to innovate has the potential to have a real impact on the challenges we currently face in society.

With a focus on collaboration this theme will work especially closely with the other clusters and themes in the 'Beyond Imagination' research project, bringing an expertise in areas including co-design, open design and participatory approaches. We will use these approaches to help communities and public sector workers be part of an active creative engagement and dialogue to address challenges and maximize opportunities for new interventions.

## Lecturer: Radical Co-Design

This post will explore and test radical new approaches to collaborative innovation and co-design. This draws on a wide variety of design research including co-design, social innovation, open design and participatory design. This will often (but not exclusively) be in a public sector context. Experience of collaborating with public sector partners would be an advantage. Candidates will develop new research that addresses the challenges of working collaboratively with external stakeholders. Ideal candidates would have experience in collaborating through innovative processes and approaches with a range of external groups. This could be directly through events, workshops, residencies and so on but also through the creation of tools and resources that support community-led innovation without relying on designers directly.

*Keywords: Co-Design, Participatory Design, Public Sector Innovation, Collaboration*

## Lecturer: Participatory Architecture and Urban Development

There is an ethical, economic and environmental imperative to involve a wider range of stakeholders and explicitly local, national and international communities in architecture and urban planning processes. Working with a range of regional and nationally important real world development projects (e.g. Eden North in Morecambe) this post focuses on undertaking research to develop and test new ways of creating productive dialogue in the planning and development process. An idea candidate would have experience of developing and running activities that included public sector planning offices, companies, members of the public or the business sector in engagement and consultation activities.

*Keywords: Participatory Planning, co-design, creative consultation, creative engagement*

## Fast Forward Workshops





**Lead: Professor Simon Guy + Dr Dan Richards, (Coulton, Wang)**

The Factory and Workplace cluster will focus on how emerging digital technologies are radically changing the ways in which we design, make and work in the future. Today AI and data-driven design systems, machine learning, digital fabrication and immersive environments are already blurring disciplinary boundaries between design, engineering, computing and manufacturing.

In the future, these developments will not only change the way we design and make products (at all scales), but will also have an impact on the places in which these products are designed, made and consumed, our working practices and indeed in the whole working environment.

To explore these shifts, this cluster will operate as an experimental laboratory to both develop new computational design strategies for making objects with advanced digital fabrication, visualization, IoT, and generative design; and exploring how such technologies co-evolve with future workplaces and environments through the use of design probes, data visualization, together with utilisation of rich ethnographic methods.

**Lecturer: Computational Design  
(Architecture focus)**

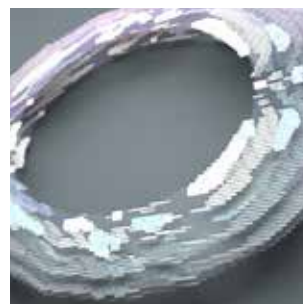
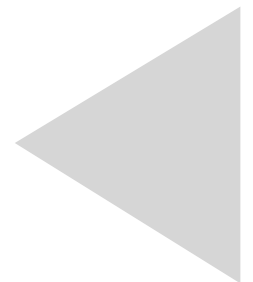
This post will focus on the capacity for digital technologies to transform and disrupt the way we design and manufacture physical objects. Ideal candidates will demonstrate the ability to both develop, test and critically evaluate innovative computational design strategies in relation to one of the following areas: digital fabrication, design for IoT, BIM, generative design, complex modelling, 3D visualisation, AI or machine learning. We are looking for individuals who can pioneer radical new approaches to design for digital manufacturing.

*Keywords: Digital Fabrication; Digital Manufacturing; Generative Design; BIM; Visualisation; AI Design; Machine Learning*

**Lecturer: Workplace Futures  
(Design focus)**

This post will focus on the co-evolution of digital technologies with changing working practices and environments. Ideal candidates will use design to creatively interrogate the connection between the way people work and the places they work within. The situations work takes place in; physically, virtually and conceptually, fundamentally shape the relationship people have with professional and entrepreneurial activities, with employers and communities, and with districts and cities. Ideal candidates will have expertise in design ethnography, data visualisation and communication, and/or creative use of design probes to explore work environments.

*Keywords: Design & Behaviour Change; Data Visualisation; Ethnography*



# City and Urban

**Lead: Professor Nick Dunn (+ Boyko, Cureton, Pollastri)**

The City and Urban cluster will focus on the future of larger concentrations of habitation and how these can be sustainable, healthy, and productive. Urbanisation processes are rapidly transforming the planet with impacts upon our lives and those of other species. Many of these consequences and their cascading effects are still unknown. What is clear is that we need radical alternatives for collective living beyond current pathways.

There is also an urgent need to find new ways of designing and delivering these alternatives. This cluster will bring together physical, digital and social aspects of living in urban environments in order to address complex challenges related to health and wellbeing, sustainable behaviours, safety and security, etc.

To explore these issues, the cluster will both develop novel architectures and urban design strategies utilising visualisation, generative design, advanced digital fabrication, AR/VR, and other speculative methods; and examine the implications of these designs through a variety of critical lenses to identify key principles and practices for wider adoption and transferability.

## Lecturer: Urban Futures

This post will focus on exploring and understanding how urban futures are designed and delivered. Ideal candidates will demonstrate the ability to critically explore the uncertainty and complexity arising from urban futures, with a focus on infrastructures and systems, and develop innovative design research to respond to these challenges.

We are looking for individuals who can be at the forefront of urban design and its connections to science and innovation. Candidates should have expertise in one or more of the following areas: urban design, planning, urban infrastructures, visualisation, or AR/VR.

*Keywords: Urban Design; Urban Futures; Urban Infrastructures, AR/VR; Visualisation*

## Lecturer: Responsive Architecture

This post will focus on exploring and understanding novel methods for architectural design and manufacturing to develop designs that are responsive to various environmental stimuli including climatic and social factors. Environmental technologies, energy (embodied and through use) and the role of architecture in ecologies will play a significant role here.

Ideal candidates will use architectural design methods to prototype adaptive structures and environments and evaluate the performance of these using quantitative and qualitative methods. We are looking for individuals who can experiment at the cutting-edge of design and fabrication processes to help develop the next generation of architecture.

*Keywords: Responsive Architecture; Generative Design; Digital Fabrication; Prototyping; Visualisation*





# Population and Policy

**Lead: Professor Rachel Cooper (+ Cruickshank, Hands, Escalante)**

This Cluster will focus on the use of design for and in policy making. It has roots in service design in social situations, but more explicitly design for policy has evolved from the notion of user-centred design, participatory design and co-design in planning products, services, experiences and in the visual and textual expressions of these processes.

The cluster applies design research and methods to address population challenges, global futures and novel ways to inform policy. This cluster will develop its design research with local authorities (district, county and unitary authorities) and the Scottish and UK government (Policy Lab and the Open Innovation Unit in the Treasury).

## **Lecturer: Urban Design Policy**

This post will focus Urban Design Policy-Making at local, national and international levels delivering research that translates directly into tangible, traceable outcomes. This includes using design research methods to; develop new policy as a driver of innovation in the delivery of places and the products and services that will support the wellbeing people in those places such as healthy aging; develop approaches to population behaviour change in relation to UK Industrial Strategy such as clean energy or future mobility; and interrogate and pose alternatives to hidden/unquestioned agendas and policy-making.

The candidate will and be able to work with interdisciplinary teams, science and social science colleagues. They will drive forward a vision for engagement with policy and change makers at national and global levels

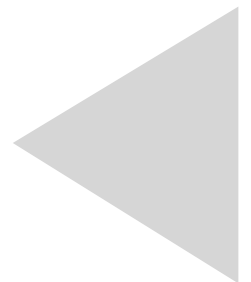
*Keywords: Urban Design and Planning, Design & Behaviour Change; Data Analysis and Interpretation*

## **Lecturer: Design Policy and Futures thinking**

This post will focus on design and policy at local, national and international levels and research that translates directly into tangible, traceable outcomes. This includes using design research methods to; develop new policy as a driver of innovation in the delivery of future products and services; develop approaches to population behaviour change in relation to UK Industrial Strategy and Global SDGs; and interrogate and pose alternatives to hidden/unquestioned agendas and policy-making.

The candidate will be able to work with interdisciplinary teams, science and social science colleagues. They will drive forward a vision for engagement with policy and change makers at national, global and national levels

*Keywords: Design for Policy, Design Futures, Design & Behaviour Change; Data Analysis and Interpretation*



# Themes - Cross cutting groups supporting clusters and doing their own research

## **Health: Designing better "Life-Courses" for All** **Lead: Professor Paul Rodgers**

Focusing on designing for the 'life course' we are particularly interested in using design research to address non-communicable diseases and their antecedents especially obesity. We will look at how our material world contributes to both the negative and the positive determinants of health, e.g. environmental effects on mental health, obesity, diabetes and antimicrobial resistance (AMR).

## **International: Design** **Lead Dr Emmanuel Tseklevs**

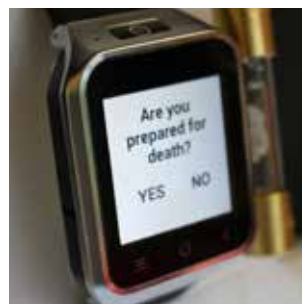
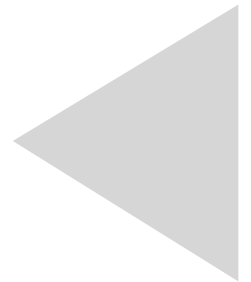
Research needs and insights cross international borders. Building on Lancaster University's international strategy across in China, Africa and South America this theme will connect our cluster research to partners in those regions, also undertaking new regional specific research enquiry.

## **Sustainability: A Sustainable Worldview by Design** **Lead: Professor Stuart Walker**

Examining different world views and their relationship to personal fulfilment, social well-being and environmental stewardship, we will develop models and realistic directions for radical change.

## **Prosperity: New Prosperities through Design** **Lead: Dr David Hands**

This theme focuses on research activities through design theory and practice, new understandings of economic, cultural and social prosperity, new relationships between people and their work.



# Post Doctoral Research Associates

For all PDRA posts we will be looking for people comfortable working in teams, passionate about the role of design. A record of accomplishment in conference and/or journal papers and experience in bid writing and submission would be an advantage, as this will be an important element of the position.

## Home and Living

We are seeking a candidate to work with us in this cluster to design and create the systems to explore the socio-technical implications of future homes and living. The candidate will need to apply technical expertise (software/hardware) to develop research functional and/or fictional prototypes that support the research goals of the cluster, and work with external partners who have interest in this topic, from technology to leisure, the construction sector and local authorities, and to engage with end users and the general public.

## Community

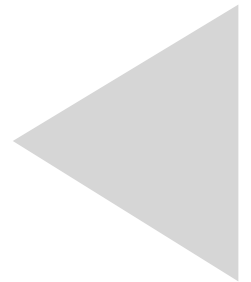
This post involves undertaking research focused on understanding how to design effectively with communities. This could include communities in the public sector, voluntary or in business. The successful candidate will have strong design skills with a first degree or equivalent in design and experience of undertaking projects with communities through co-design, service design or other participatory approaches. Through all of these we expect to see evidence of active collaboration with communities rather than designs imposed on communities. Experience of working with the Public Sector would be advantageous but not essential.

## Factory and Workplace

This post will focus on developing and evaluating digital technologies that augment the way we design, make and work in the future. Ideal candidates will demonstrate both strong design and prototyping skills and the ability to critically evaluate the implications of new technologies in relation to digital manufacturing and future environments. We are looking for experimental creative technologists who care deeply about the impact that data and digital technologies have on the way we design and work. The successful candidate will have skills and/or the potential to work in Prototyping; Digital Fabrication; Interaction Design; Generative Design; Visualisation; Creative Coding; AR/VR; HCI; BIM; AI Design.

## City and Urban: Dark Design

This post will explore the relationships between lighting and materials to prototype design interventions for environments at night. This is driven by the need to identify innovations and develop guidelines for reducing the health and environmental impacts of light pollution without compromising the prosperity of places. Ideal candidates will demonstrate both strong design and prototyping skills and the ability to critically evaluate the implications of new innovations at architectural scales and in urban contexts. We are looking for experimental designers that can develop innovative responses to challenges facing environments across a number of scales.



# Post Doctoral Research Associates

## Population and Policy

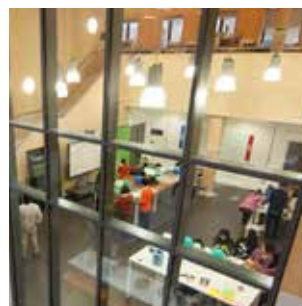
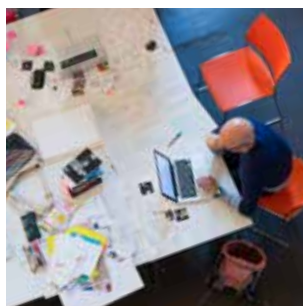
This post involves undertaking research that focuses on the use of design for and in policy making and in futures thinking in government and policy. This will include work that builds on a track record of informing policy and engaging at a national, local and population scale, working with, for instance, local authorities (such as Lancaster City and County Council), and UK government (Policy Lab in the Cabinet Office, Open innovation Unit in the Treasury). A successful candidate will have strong design skills and research experience of undertaking projects using service design and participatory approaches to design and innovation in organisations. Also the candidate should have/or potential to develop skills in quantitative research and data analysis.

## Health

We are looking for a candidate that possesses strong skills and experiences in designing and making in an evidence-based context. In particular, we are looking for a researcher who will develop fresh and exciting approaches, methods, and techniques in designing and creating products, services, and systems for future health contexts. Candidates should be able to demonstrate a good working knowledge of contemporary design and health literature, experience in implementing and analysing qualitative and, potentially, quantitative research. It is anticipated that future projects under this theme will be undertaken in close collaboration with local, national and international partners spanning a range of mental and physical health issues. We seek an individual who is comfortable working across and beyond disciplinary and methodological boundaries and who is capable of working in teams in a highly collaborative fashion.

## Sustainability

The successful candidate will be a team player who can work effectively across a variety of areas to embed sustainability principles into design-led research projects. The interrelated areas of interest in ImaginationLancaster span future living and working, urban futures, public sector and policy. Candidates should be able to demonstrate a good working knowledge of contemporary sustainability literature, experience in implementing and analysing qualitative and, potentially, quantitative research, especially in relation to sustainability, design and making skills would be desirable. It is anticipated that future projects under this theme will be undertaken in close collaboration with local, national and international partners.



# Post Doctoral Research Associates

## International

Building on Lancaster University's international strategy in China, Africa, South East Asia and South America this theme will connect Imagination Lancaster's research to partners in these regions, whilst also undertaking new regional specific research projects. The successful candidate will be expected to actively contribute to design research related to Global Development Challenges. Examples include research focusing on understanding cleaning practices and driving infections from homes in Ghana; developing health and care policies for senior citizens in Malaysia; developing research that tackles malnutrition by co-designing, with communities of women in the Peruvian Andes, interventions based on traditional food sources; and promoting across Europe circular economy eco-innovative seafood processes and products for a healthy ageing. They will work in collaboratively and will have the opportunity to conduct research activities overseas with the opportunity to be based at international research institutions for short periods of time (2-4 weeks).

## Prosperity

The successful candidate will possess skills and expertise to use novel design research methods to address productivity and economic challenges in both the public and private sectors; for instance to develop new digitally orientated frameworks for business model innovation in the delivery of future products and services; to critically interrogate consumer-brand interactions and to understand how AI/Digital technologies can lead to long-term sustainable success for commercial enterprises. In essence, the researcher will be instrumental in critically examining the role of design thinking to foster business and social prosperity throughout a wide range of geo-spatial contexts. The successful candidate will be able to work within interdisciplinary teams of researchers and social science colleagues and to work with partners in business, community and government.

## Creative Evaluation

This post involves undertaking research on creative evaluation and understanding the impact of research projects in real world contexts. Working closely with the Beyond Imagination management this will involve collaborating with a wide range of activities developed within the Beyond Imagination project. This will involve the collaborative development of evaluation frameworks and the development of innovative ways of implementing these in a creative manner. This will build on existing research on the implementation of creative evaluation with organisations such as The Victoria and Albert Museum and the World Design Weeks organisation. The successful candidate will be active in publishing on evaluation as well as practiced in implementing evaluation in real world contexts and be comfortable working in teams and across disciplines.

