Candidate Information

Position:	Research Fellow
School/Department:	Centre for Public Health
Reference:	21/109370
Closing Date:	Monday 6 December 2021
Salary:	£34,304 - £36,382 per annum
Anticipated Interview Date:	Friday 17 December 2021
Duration:	Available until 14 May 2023

JOB PURPOSE:

This exciting position will allow the successful candidate to join a collaborative project between the Centre for Public Health, Queen's University Belfast and the Transport, Health and Urban Design Research Hub, University of Melbourne.

The successful candidate will become a member of the Centre for Public Health research team working alongside Prof Ruth Hunter and Dr Leandro Garcia in a program of research funded by UK Research and Innovation (UKRI).
The aim of this project is to generate new evidence related to the intersection of urban design and health, understanding and estimating the improvements in non-communicable diseases (NCD) and health inequalities in UK and Australian cities that can be achieved through tangible alteration in urban design. It also aims to place new tools in the hands of urban designers, planners and the broader public so they can advocate and act on their recommendations. It will do this by:

- Utilizing computer vision and artificial intelligence methods to explore the relation between urban design, city types, and NCD in UK and Australian cities.
- Investigate how inter- and intra-city urban design disparities are associated with inequalities in incidence and prevalence of NCD.
- Combine large cohort and GIS data to prospectively investigate the causal pathway between urban design, NCD risk factors, and NCD incidence.
- Estimate improvements in the burden of NCD that could be achieved through actionable changes to the built environment at different scales.
- Design and develop a comprehensive, accessible, web-based toolkit for action tailored for use by urban designers, planners, policymakers, and the broader public.

This project requires a Postdoctoral Research Fellow with existing experience and interest in quantitative research methodologies. It is expected that the successful candidate will have existing experience on comparative risk assessment modelling methods. In addition, it is desirable that the successful candidate has skills relevant to the interrogation of large population-based datasets, particularly the application of Bayesian networks or the capacity to competently add these skills to an otherwise strong quantitative research method base. Working in an interdisciplinary project, the successful candidate will be required to assimilate disparate information from multiple sources and acquire a firm understanding of the strengths and weaknesses of imagery, spatial, and epidemiological data and its application.
As a member of this project, the Research Fellow will be part of a multidisciplinary team with experience across public health, epidemiology, health promotion, urban planning, complex systems, computational modelling, artificial intelligence, software engineering, mathematics, and computer vision. The successful candidate will have the opportunity and support to be creative and academically brave, add their own ideas and innovations to the project, establish and pursue a research theme of their own, and conduct high-quality research that will resonate at local, national, and global levels.

MAIN ACTIVITIES:

1. Undertake research under supervision within the specific research project, helping to create a collaborative and supportive environment as a member of the research team.
2. Coordinate the collection, documentation, and storage of project data.
3. Carry out data analyses, critical evaluations, and generate reports using appropriate methods.
4. Keep abreast of developments in own specialism and related disciplines and engage in technical training as needed.

5. Lead and participate in the preparation of a range of publications based on research findings, including peer-reviewed academic articles and presentations at international conferences.
6. Present progress reports and research findings to members of the project team, other groups within the Centre and University, and to external audiences nationally and internationally.
7. Assist principal investigators and partners in the preparation of project progress reports to funding and external bodies, as well as of new funding proposals and applications.
8. Assist with routine administrative tasks associated with the research project to ensure that the project is completed on time and within budget and that the group functions efficiently.
9. Assist with the training and supervision of undergraduate and postgraduate students and visiting researchers, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
10. Participate and in some cases lead outreach activities on behalf of the group or the Centre.
11. Follow University's, School's, and Centre's policies and regulations.

PLANNING & ORGANISING:

1. Plan for specific aspects of own research program and tasks and contribute to research group planning.
2. Plan own day-to-day activity within the scope of the agreed research program.
3. Assist and in some cases lead plans for research activities and workshops when appropriate.
4. Meet deadlines for grant applications, journal publications, and presentations and papers for conferences and meetings.
5. Coordinate and liaise with members of the project team and other research groups to complete tasks within deadlines.

RESOURCE MANAGEMENT & RESPONSIBILITIES (e.g. People, Finance, Equipment):

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any undergraduate and postgraduate students and visiting researchers who may be assisting with research.

INTERNAL & EXTERNAL RELATIONSHIPS:

1. Liaise on a regular basis with supervisor, colleagues, students, and collaborators.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Join external networks to share information and ideas and help develop external collaborations, as appropriate.
4. Be prepared to travel to and present at scientific meetings and partner research groups and stakeholders.
5. Contribute to the School's outreach program by establishing links with local community groups, industries, governmental organizations etc.

ESSENTIAL CRITERIA:

1. Have, or about to obtain, a PhD in public health, epidemiology, computer science, biostatistics, engineering, or a related area.
2. At least 3 years relevant research experience.
3. Strong track record in the application of a range of statistical and computing approaches, relevant research experience, involving a range of statistical and computational approaches relevant to the interrogation of large population-based and spatial datasets.
4. Demonstrated ability to conduct key tasks for the development and completion of research projects, such as ethics approval, data collection, preparation of data analysis plan, and data analysis and reporting.
5. Demonstrated skills in using at least one statistical and or spatial analysis package (e.g., Python, R, Stata, QGIS, ArcGIS) and capacity and willingness to learn others.
6. Research publications commensurate with career stage.
7. Familiarity with the governance, technical, and ethical issues related to accessing and using health and spatial datasets.
8. Ability to contribute to project management and administrative processes.
9. Ability to communicate complex information clearly.
10. Demonstrated ability to work effectively as a member of a team as well as capacity to work independently.
11. Demonstrated ability to think critically and solve problems to successfully complete tasks.
12. Irregular hours may be a component of the research at times (e.g., calls with Australian partners before or after normal work hours).

DESIRABLE CRITERIA:

1. Experience or training in Bayesian networks and or comparative risk assessment modelling.

2. Previous experience in research projects that deliver against targets and timelines, preferably within an interdisciplinary environment.
3. Experience working in public health, epidemiology, or health behaviours.
4. Grant writing experience.
5. Willingness to supervise and train undergraduate and postgraduate students and visiting researchers.
6. Willingness to contribute to the School’s outreach program.
7. Demonstrated ability to build contacts and participate in internal and external networks.