

POSITION DESCRIPTION

Position Title	Senior Research Fellow Medical Geography/Spatial Epidemiology
Business Unit:	Health Research Institute, Faculty Health
Appointment Level:	Academic Level C Fixed Term for 4 years (with possibility for a continuing position)
Reporting To:	Prof Mark Daniel

THE UNIVERSITY OF CANBERRA

The University of Canberra is a young University anchored in the national capital. UC works with government business and industry to serve our communities and nation. UC challenges the status quo always pursuing better ways to teach, learn, research and add value – locally and internationally. Distinctive by Design, UC is the University for the Professions.

Its purpose is to provide education which offers high quality transformative experiences to everyone suitably qualified; to engage in research which makes an early and important difference to the world around us; and to contribute to the building of just, prosperous, healthy and sustainable communities.

Our Shared Plan has five interconnected streams of strategic intent that will drive our quest to shape UC into a globally prominent institution of learning, research and public engagement. This will empower our diverse people to drive our core missions of distinctive teaching and research in an enriched living – learning environment encompassing our Canberra campus and global locations.

BUSINESS UNIT OVERVIEW

Marked by youthful dynamism and determination, the University of Canberra has been on a distinctive journey since its inception. With its dual focus on producing profession-ready graduates and mission-oriented, problem-solving research, the University has risen in merely a quarter of a century to rank among the top one per cent of universities overall. Anchored as a leading institution in Australia's capital, we occupy a ringside seat at national debates and decision-making, frequently informing and influencing these deliberations.

The Australian Geospatial Health Research Hub (AGeo-H) is a partnership between the University of Canberra and GIS industry leader Esri to support population research applying spatial epidemiology to understand and prevent chronic disease. AGeo-H enables the elucidation of built, social, natural and physical environmental factors to be targeted by policy and practice-level innovations to reduce risk factors

and treatment costs arising from obesity, metabolic syndrome, diabetes, cardiovascular diseases and cancers. Such work involves geospatial modelling with inferential, multi-level analyses assessing environmental features together with individual risk factors (diet, physical activity, alcohol, smoking, clinical measures, biomarkers and disease outcomes) as these vary over time and change in response to policy, and public health and practice-based intervention. Predictive modelling informs the depiction of high-priority target areas and provides stakeholders indispensable decision-making tools for the planning of public health policy and practice interventions. The goals of AGeo-H are:

- Provide a resource with appropriate flexibility in support of both public and private sector initiatives applying geospatial analysis of health and health care relevant data;
- Exemplify a foremost collaborative effort to facilitate the geospatial analysis of public health data for prevention research involving internal and external partner agencies;
- Support and co-ordinate existing expertise in trans-disciplinary geospatial analysis, health policy, health planning, environmental health analysis, and spatial epidemiology; and
- Facilitate the development of new approaches and methodologies to sustain effective public health and health and medical care interventions.

POSITION PURPOSE

This position is with the Centre for Research and Action in Public Health (CeRAPH) in the UC-Health Research Institute. The successful candidate will support research projects funded by the Digital Health Cooperative Research Centre DH CRC. <https://www.digitalhealthcrc.com/> which was established in 2018 with \$220M in funding with over 80 industry partners and 16 universities. The applicant will work with the newly established Australian Geospatial Health Research Lab (AGeo-L), an industry partnership between the University of Canberra and GIS industry world leader Esri to support population research applying spatial epidemiology to understand and prevent chronic disease. AGeo-L enables the elucidation of built, social, natural and physical environmental factors to be targeted by policy and practice-level innovations to reduce risk factors and treatment costs arising from obesity, metabolic syndrome, diabetes, cardiovascular diseases and cancers. Such work involves geospatial modelling with inferential, multi-level analyses assessing environmental features together with individual risk factors (diet, physical activity, alcohol, smoking, clinical measures, biomarkers and disease outcomes) as these vary over time and change in response to policy, and public health and practice-based intervention. Predictive modelling informs the depiction of high-priority target areas and provides stakeholders indispensable decision-making tools for the planning of public health policy and practice interventions.

PRIMARY RESPONSIBILITIES

1. Provide leadership and direction in the development and application of Geographic Information Systems (GIS) to analyses of environmental indicators, health-related behaviour and health and wellbeing indicators, disease outcomes and consequences, and health care provision and utilisation.
2. Undertake geo-spatial mapping and advanced spatial analysis to investigate patterns/drivers of chronic diseases and associated health outcomes.
3. Manage large and complex health databases with spatial components.
4. Ensure confidentiality of databases and related information and adhere to data governance requirements and legislation.
5. Liaise and coordinate with external organisations in the collection and sharing of expertise, information and data sets that support GIS applications.
6. Source and access relevant health and spatial data from external organisations.
7. Contribute to writing of research publications, reports and presentations, including peer-reviewed journal articles. Contribute to development of research ethics applications.
8. Assist with the supervision of HDR students and mentoring of junior staff.

9. Other duties as required.

KEY CAPABILITIES

Key Capabilities	Descriptors
1. Research skills	<p>1.1 Engages in effective and strategic research and service activities</p> <p>1.2 A strong background in GIS and health related modelling and analysis and demonstrated ability in managing large data sets</p> <p>1.3 Demonstrated ability to conduct and publish quality research, with evidence of high-quality papers and national and international impact of research.</p> <p>1.4 Experience in leading and producing scientific outputs including reports, conference presentations and peer-reviewed publications</p>
2. IT and Digital Literacy	<p>2.1. Experience using ArcGIS 10.2; including its extensions (Spatial Analyst, Spatial Statistics, Model Builder, Python programming desirable)</p> <p>2.2. Proficiency in relevant professional statistical and database software (such as Access, Excel, SPSS, Stata, R, SAS, SaTScan, GeoDa, WinBUGs).</p>
2. Effective Communication	<p>2.1 Adjusts message and delivery appropriate to audience.</p> <p>2.2 Listens to others and effectively communicates ideas.</p> <p>2.3 Influences and negotiates persuasively.</p>
3. Collaboration	<p>3.1 Creates opportunities for communities of work colleagues.</p> <p>3.2 Looks beyond self and immediate team to add value to the whole University.</p> <p>3.3 Develops relationships with external parties. Seeks and acts on opportunities to connect external parties and customers to the University.</p>
4. Delivers results	<p>4.1 Delivers on agreed outcomes and escalates issues as appropriate.</p> <p>4.2 Identifies opportunities to improve processes and takes opportunities to problem solve to deliver outcomes.</p> <p>4.3 Responds effectively to changing circumstances and prioritises effectively.</p>
5. Business Acumen	<p>5.1 Understands the purpose of own position and how this contributes to the objectives of the University.</p> <p>5.2 Manages resources effectively.</p> <p>5.3 Understands the commercial context the University operates in and takes every opportunity to identify and convert outcomes.</p>
6. Leadership	<p>6.1 Proactively addresses challenging issues and takes responsibility for seeing issues through. Assist team members recognise barriers and overcome them.</p> <p>6.2 Connects the University Strategic Plan with the team and reinforces connections with other staff.</p> <p>6.3 Builds and communicates a clear and compelling path for others to choose</p>

to be committed and engaged.

6.4 Champions and role models effective change while working to engage and enthuse others to embrace a vision of change.