SCHOLARSHIPS Available
Students will be based in the GeoHealth Laboratory on the 3rd floor of the BT Building.
A scholarship is approximately 400 hours of work.
Scholarship value: **$5,000 - $6,000**
Closing date for all: **Fri 31st July 1pm**.
To apply, email the named lead person on each project, by the due date.

Homelessness in Aotearoa New Zealand.

This scholarship will investigate the multiple dimensions of homelessness in Aotearoa New Zealand by integrating relevant national and community datasets. You will have an opportunity to contribute to a pressing social issue by exploring the patterns, causes, and responses to homelessness in NZ. The project will combine a theoretical overview of the social and political determinants of health in a literature review, as well as undertaking data analysis and mapping to build a clearer picture of where and why homelessness is occurring.

You will be supported to work with researchers in the GeoHealth Lab to curate and combine data (such as Census, NZ Deprivation Index, etc) and, where appropriate, approved administrative datasets (e.g. GHL transience index) to help add colour and depth to our understanding of the issue. For example, you might examine issues such as how homelessness intersects with socioeconomic deprivation, housing affordability, access to health and social services, and local environmental characteristics, providing new insights into the geographic distribution and drivers of housing need. Where possible, you will make connections to local organisations responding to homelessness to understand the current situation in more detail with timely information and to ground-truth some of the more aggregated datasets. The quantitative analysis will be preceded by a literature review examining evidence on homelessness and health, summarising evidence of interventions, programmes, and policies that demonstrably reduce homelessness. The primary outcome of the project will be a suite of maps, interactive visualisations, and policy-relevant analyses that could be used to inform targeted interventions by government agencies, local authorities, iwi, and community organisations.

Key tasks • Source and clean relevant datasets and document data preparation. • Produce descriptive and spatial analyses of homelessness indicators. • Conduct a literature review on homelessness and health. • Create clear visualisations and maps of key patterns. • Prepare a final written report.

Deliverables

1. Dataset and reproducible R scripts.

2. Maps and visualisations of housing need (as outlined above).

3. Presentation on key project findings. (get creative, infographics / video / presentation)

4. Final written report (potentially as part of a taught course or dissertation).

This scholarship will likely suit a student with an interest in housing, public policy, or social geography, and with some growing experience in spatial and data analysis. It offers an opportunity to contribute to evidence-informed approaches. This project will work in collaboration with others in the GeoHealth Laboratory. Contact: Malcolm.Campbell@Canterbury.ac.nz | Value: $5,000 - $6,000. Supervised by Prof. Malcolm Campbell

Stages of project: Milestones (3)
Stage 1 - $2000 [Aug]
Stage 2 - $2000 [Oct]
Stage 3 - $2000 [Dec]
Total $6,000

The start date we suggest is early August.

mGeoHealth: using GPS and mobile phone location data to understand dynamic exposures

Project Description

This project will look at several sources of personal (GPS individually collected) and aggregated mobile GPS data (e.g. Mobile Phone Location Data – MPD from applications) that can be connected to the Census geographies for 2023 to better understand the time-weighted exposure. Using preexisting data on the environment, such as the Healthy Location Index, or its components – the 'goods' and 'bads', e.g. Greenspace or specific outlet types we can further refine exposure metrics to specific health-promoting or health-constraining features impacting on exposure.
The overarching project aim is to develop a time-weighted exposure measure that will aid in more specifically understanding both the durations and locations of exposure, advancing our understanding of health and environment interactions, and more precisely assigning where (spatial) and for how long (temporal) an exposure occurred.

You will also develop a theoretical overview of the key conceptual ideas and write a short summary of the relevant literature.

This scholarship will likely suit a student with a strong interest in spatial and data analysis with significant coding skills. This project will work in collaboration with others in the GeoHealth Laboratory. Contact: Malcolm.Campbell@Canterbury.ac.nz | Value: $5,000 - $6,000. Supervised by Prof. Malcolm Campbell

Suggested Readings:

- **Campbell, M., Marek, L., & Hobbs, M. (2021).** "Reconsidering movement and exposure: Towards a more dynamic health geography." *Geography Compass*, 15(5), e12566
- **Kim, E.-K., Conrow, L., Röcke, C., Chaix, B., Weibel, R., & Perchoux, C. (2023).** "Advances and challenges in sensor-based research in mobility, health, and place." *Health & Place*
- **Dewulf et al..** "Dynamic assessment of exposure to air pollution using mobile phone data". Int J Health Geogr (2016) 15:14
- **Kwan, M.-P. (2012).** "The uncertain geographic context problem." *Annals of the Association of American Geographers*, 102(5), 958–968.
- **Nazelle, A. et al.** "Measuring environmental exposures in people's activity space: The need to account for travel modes and exposure decay." *Journal of Exposure Science & Environmental Epidemiology*, 2023
- **Smith, L., Foley, L., & Panter, J. (2019).** "Activity spaces in studies of the environment and physical activity: A review and synthesis of implications for causality." *Health & Place*, 58

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