The seminar will comprise two short talks:

**Title:**
**An Evaluation of Alternative Weightings for Analysis of a Complex Cross-Sectional Health Survey**

**Abstract:**
Regression analysis of survey data often incorporates the survey weights to allow for a complex sample design. This can be done using the design weights, calibrated weights, the product of the design weights and a function of the covariates, or smoothed weights given the values of the response and covariates. The statistical and practical properties of these options are evaluated using the New Zealand Health Survey, which is an example of a complex, multi-stage, dual-frame health survey which oversamples ethnicities.

**Title:**
**Sampling Minorities in New Zealand Using a Combination of Imperfect Strategies**

**Abstract:**
Subpopulations, including Maori, Pacific and Asian populations, are a particular focus of the New Zealand Health Survey. No national list frame is available, and a combination of imperfect strategies has been used to target these minorities. These include oversampling by region, a dual frame design making use of the Electoral Roll, and the use of proxy reporting of ethnicities to target selection within households. All approaches are subject to error, and a novel design has been implemented to blend these strategies while reflecting their error. This design is summarised and its performance over its first three years is evaluated. The effect of population movements over time on the efficiency of various alternative designs is explored.