

Mere Kirihimete and welcome to the last digest of 2019.

Digest posts will resume in January. If you have something that you would like advertised the best way is to send the information in an email to [mssanz@iemss.org](mailto:mssanz@iemss.org) and the person handling the digest will pick up your message and include it in the Friday posting.

Ngā mihi o te tau hau / all the best for a great new year, Val

- There are **three** (!) water-related Postdoc Researcher positions at Aalto University, Finland! The deadline for applications is 31 January. The positions are:
  - [Water governance & policy](#)
  - [Machine Learning in Water and Development](#) issues
  - [Environmental Hydraulics & Environmentally Sound Hydraulic Engineering](#)See these and other positions at Aalto University at: <http://aalto.fi/careers>
- ANU is seeking a motivated student interested in statistics, health and data visualisation. See more information on this below.  
Contact [alice.richardson@anu.edu.au](mailto:alice.richardson@anu.edu.au) or [Bernard.Baffour@anu.edu.au](mailto:Bernard.Baffour@anu.edu.au) for more information.
- Information on the sessions for iEMSs (International Environmental Modelling and Software Society) 2020 is [now online](#). Key dates are:
  - Abstract Submission: February 1, 2020
  - Online Registration (early-bird): April 1, 2020
  - Formatted Abstract & Draft Paper Deadline: April 1, 2020
  - Final Paper Deadline: May 15, 2020
  - Conference Dates: July 6-10, 2020

#### **Title**

A spatial visualisation tool to align national health outcome data with regional health policy objectives

#### **Research Areas**

Statistics, Demography, Small area estimation

#### **Award Type**

PhD

#### **Funding Body**

NHMRC

#### **Outline**

While tobacco smoking is declining on average over time on both Indigenous and non-Indigenous populations, the prevalence is spatially diverse and distributed unevenly throughout the population. This variation makes monitoring the situation particularly difficult. Yet there is a tremendous demand for such information to ensure proper planning and resource allocation. This is particularly true for regions where policy interventions have taken place with little ability to use data to evaluate their success, and little ability to identify areas of best practice.

This problem of sparse data has been regarded as intractable in the past; for example the confidence intervals associated with smoking prevalence in up to 40% of remote regions are suppressed due to

unacceptably high standard errors. This means that regions miss out on the evidence of what works in their community. These are typically regions that are coping with multiple levels of disadvantage, for example higher levels of social exclusion and higher levels of risky behaviour such as smoking.

After a review of the state of the art of small area estimation, we will build a multilevel statistical model for the estimation of smoking prevalence in small areas across the whole of Australia. This will lead to mapping the prevalence of smoking prevalence with increased precision in sparsely sampled regions of Australia. A third part of the project will evaluate the impacts of interventions implemented at the small-area level (rather than a State or national) level on smoking prevalence over time.

The student will contribute to methodological advances in the area of small area estimation. This is an opportunity to work with an active research team of experts in statistics, demography and small area estimation.

**Eligibility**

- Masters' degree in statistics / demography
- Experience in conducting methodological research applicable to statistics and/or health research
- Working knowledge of R software
- Well-developed written and oral communication skills
- Excellent planning and organisational skills

**Award Amount**

The scholarship stipend is \$28,000 per annum per year for 3 years. Students will be supported to apply for competitive scholarship funding.