



PICNIC POINT, TOOWOMBA, QUEENSLAND

# Epi in the Garden City

April 9th-13th, 2018

Toowoomba, Queensland

'A DELICATE BLEND OF NUMBERS AND SCENERY'

The concept of this workshop follows the success of *Epi in the Vineyard* held in the Barossa Valley in 2017 – i.e. to learn about statistics and epidemiology study in an inspiring location far away from the hustle and buzzle of major cities. And who else than **Ian Dohoo**, upmost outdoor enthusiast, to teach on the crest of the **Great Dividing Range**, around 700 metres above sea level.

## The topic: Multi-level modelling

Clustered data are very common in veterinary medicine and public health. Techniques for appropriately analysing such data have developed tremendously over the past 15 years. This 5 day course will cover most of these recently developed methods. Participants should come to the course with a basic knowledge of linear and logistic regression models. The course will consist of a mixture of lectures and structured laboratories along with some time allocated for participants to work on their own data. Participants will be assisted in these analyses by course instructors. On the final day, participants will be given the opportunity (strictly voluntary) to present their data and analyses to the class for discussion purposes. The primary software used in the instruction will be MLwiN. (Note: a trial version of MLwiN and extensive learning resources are available from the MLwiN website: <http://www.bristol.ac.uk/cmm/software/mlwin/> - participants are asked to download this trial version shortly before coming to the course). Both Stata and R will also be used in the course (including how to run MLwiN from within Stata/R and how to run models directly in those programs). Students wishing to use either of these programs will be encouraged to pre-load R (public domain software) or bring their own copy of Stata (a trial version of Stata will also be provided during the course).

## Workshop Contents

In general, each day will consist of a mixture of lectures and lab exercises using provided data sets.

Day 1 - Introduction to the course and to clustered data, basics of linear mixed models (LMM), introduction to MLwiN

Day 2 - Generalized linear models, generalized linear mixed models (GLMM), overview of multilevel model diagnostics

Day 3 - Visualisation of multilevel data, random slopes, contextual effects, alternative approaches for dealing with clustered discrete data.

Day 4 - Procedures for analysing repeated measures of both continuous and discrete outcomes, advanced procedures for discrete repeated measures.

Day 5 - time for participants to work on own data (or a provided dataset), presentations by students (voluntary) of their own analyses

## The venue: Toowoomba, QLD

Location: **Toowoomba City Library** (corner of Victoria and Herries Street)

Dates: **April 9<sup>th</sup> to 13<sup>th</sup> 2018, 8am-6pm**

## Ancillary activities:

Depending on your energy after along of day of statistics, activities include:

- [Visiting Preston Peak Winery](#)
- [Climbing Table Top Mountain](#)
- Visiting the Japanese Garden
- Workshop dinner in one of the great restaurants in Toowoomba

## Registration and fees:

To register, visit the event [registration website](#) (facilitated through the University of Melbourne). The registration fee includes e-notes, tea breaks and lunches.

Graduate student\*                      AUS\$950

Non-student                              AUS\$1,250

\*50% rebate for the 2<sup>nd</sup> graduate student if registered before January 31<sup>st</sup>, 2018.



## Ian's Bio

Ian is an internationally known veterinary epidemiologist (loosely translated this means he has been at it a long time). He is a Professor Emeritus at the University of PEI and is the leading author of the textbook '[Veterinary Epidemiologic Research](#)'. Numerous students around the world have participated to his courses. Most survived the experience. He has a particular interest in the advancement of epidemiologic methods, including analyses of hierarchical data, survival analyses, meta-analyses and bias assessment.

## Instructors for workshops

[Joerg Henning](#) and [Tamsin Barnes](#)

## Practical information

Toowoomba is 1.5 hours' drive from Brisbane. If you come from interstate you could fly into Brisbane and then take a bus or hire a car to drive to Toowoomba.

Toowoomba has also its [own airport](#) with flights to major Australian cities.

There are many accommodation options in Toowoomba.

## Contact

For more information about this course, please contact Joerg Henning from The University of Queensland ([j.henning@uq.edu.au](mailto:j.henning@uq.edu.au)).