SHORT COURSE: Multilevel statistical methods

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Date: 16 - 17 March 2016
Time: 9am – 4pm
Venue: Seminar Rooms 302/303, Level 3, 207 Bouverie St, University of Melbourne VIC 3010
Cost: $700 ($650 Early-bird registration before 1st March)

COURSE DESCRIPTION
This course is designed to provide training in the concept and application of multilevel statistical modeling. You will be motivated to think about correlated and dependent data structures that arise due to sampling design and/or are inherent in the population (such as pupils nested within schools; patients nested within clinics; individuals nested within neighborhoods and so on). The substantive purpose of this course is to enable quantitative assessments of the role of contexts (e.g., schools, clinics, neighborhoods) in predicting individual outcomes. This will be accomplished by developing a range of multilevel models along with a detailed discussion of the statistical properties and the interpretation of each model. A short demonstration of implementing multilevel models in MLwiN will be provided. Participants will receive a manual written by S V Subramanian and K Jones, Multilevel Statistical Models.

COURSE OBJECTIVES
By the end of the 2 day course, you should be able to:

• Recognize a research problem requiring a multilevel modeling approach.
• Describe the technical and substantive advantages of multilevel models.
• Explain the basic principles of multilevel modeling using graphical, verbal and statistical language for a range of multilevel models.
• Understand the concept of clustering and heterogeneity.
• Develop a variety of models that enable quantitative assessment of contextual effects.
• Interpret and communicate the substantive meaning of results from simple and complex multilevel models.