

Workshop on Linear Mixed and Generalized Linear Mixed Models

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Workshop Description:

The class of generalized linear mixed models (GLMMs) is a broad class of statistical models generalizing both linear mixed models (LMMs) and generalized linear models (GLMs). As such it is capable of accommodating nonlinear responses, correlated data and non-normal distributions. This makes it quite useful in practice. For example, GLMMs give a natural way to specify a correlated data model for binary data.

The workshop will briefly review the concepts of linear mixed models and the use of random effects as well as the modeling strategy behind generalized linear models. From these two classes of models will be developed generalized linear mixed models. A series of examples will be considered to develop intuition about how to specify these models in real situations.

Next, features of generalized linear mixed models will be developed and strategies for fitting the models to data will be described and contrasted with approaches such as generalized estimating equations. A series of case studies will be used to illustrate the practical use of these models. The focus in the course will be on approaches to modeling, methods of estimation and inference, and available software.

Schedule:

June 4, 2008

8:00 - 8:15	Continental breakfast
8:15 - 10:30	Introduction
10:30 - 10:45	Break
10:45 - 12:00	Linear mixed models
12:00 - 1:00	Lunch
1:00 - 2:30	Generalized linear models
2:30 - 2:45	Break
2:45 - 4:30	Introduction to generalized linear mixed models

June 5, 2008

8:00 - 8:15	Continental breakfast
8:15 - 10:30	Modeling in generalized linear mixed models
10:30 - 10:45	Break
10:45 - 12:00	Model fitting methods
12:00 - 1:00	Lunch
1:00 - 2:30	Software, Case studies
2:30 - 2:45	Break
2:45 - 4:30	Case studies continued, Question/Answer