Bayesian methods
Lab notes

Lab 5 Hierarchical linear models: a growth curve analysis using the Gibbs sampler.

Example A hierarchical model for straight-line growth curves


Language BUGS codes: Rats: a Normal hierarchical model in BUGS Examples Volume I, Birats: a bivariate Normal hierarchical model in BUGS Examples Volume II

Subject The weights of 30 rats in a control group were measured weekly for five weeks. We assume a random effects linear growth curve model with two alternative priors for the individual effects (intercept and slope for each rat growth curve). One is a bivariate normal prior that specifies a covariance between the random intercept and the random slope (birats); the other one consists in two independent priors for the random intercept and, respectively, the random slope (rats).

The BUGS codes are linked at the course web page.