

On Optimal Designs in Random Coefficient Regression Models and Alike

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ABSTRACT

In the biosciences individual effects are often modelled by random coefficients to cope with the variability within the population. The structure of these random coefficients affect the covariance matrix for estimating the fixed effects and, hence, the performance of the experimental design. In our research we investigate the optimality of cross-sectional designs for which all individuals are treated under a similar regime. Particular attention will be paid to random intercept models and generalizations to multi-factor situations. Some applications to nonlinear models will be indicated. (work in progress)