

***V*- and *D*-optimal population designs for the quadratic regression model with a random intercept term**

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In this paper *V*- and *D*-optimal population designs for the quadratic regression model with a random intercept term are considered. This is done with special reference to longitudinal data, that is data measured repeatedly at specified time points. Individual designs comprising up to $k+1$ distinct and equally spaced values of the explanatory variable are assumed to be available. The problem of constructing a population design which allocates weights to these individual designs in such a way that the information associated with the fixed effects is in some sense maximized and the variances associated with the mean marginal responses at a given vector of time points are in some sense minimized are addressed. *D*- and *V*-optimal population designs based on one- and two-point individual designs respectively are discussed.