A semiparametric mixture regression model for longitudinal data

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Abstract: A semiparametric normal mixture regression model is proposed such that the model contains one smooth term and a set of possible linear predictors. Model terms are estimated using the penalized likelihood method with the EM-algorithm. A computationally appealing alternative that provides an approximate solution using an ordinary linear model methodology is also introduced. Simulation experiments and real data examples are used to illustrate the methods.