Title: Bayesian estimation of mixture regression by wavelets

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In this work we consider a mixing problem of two Gaussian components, where the weight of the mixture has a dynamic behavior (for example, it varies over time). We propose a Bayesian method to jointly estimate the component parameters and the dynamic mixture weights. The key idea of this method is to apply a transformation to the data to deal with a regression problem, where dynamic mixture weights represent the regression function. Estimates are obtained based on MCMC samples of the posterior parameters. For this task, an efficient algorithm based ona Gibbs sampler is proposed. We observed a good performance of the method through Monte Carlo simulation studies. Furthermore, a real dataset application using an array Comparative Genomic Hybridization (aCGH) data illustrates our approach.