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Sparsistent and constansistent estimation of the varying-coefficient model with a diverging number of predictors. (English) [Zbl 1396.62083](#)

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Summary: The varying-coefficient model is a flexible class of approaches that extends simple linear relationships between covariates and responses. Two related problems concerning these models are selecting relevant variables and determining non-varying coefficients among those relevant ones. In this paper we study the sparsistency and constansistency of the regularized estimation approach when the number of predictors diverges with the sample size. Here, constansistency refers to the desired property that the non-zero, non-varying coefficients are identified with probability tending to one.

MSC:

[62G08](#) Nonparametric regression and quantile regression
[62J05](#) Linear regression; mixed models
[62G20](#) Asymptotic properties of nonparametric inference

Keywords:

[BIC](#); [B-spline basis](#); [constansistency](#); [varying-coefficient models](#)

Full Text: [DOI](#)

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