ON ADAPTIVE COMBINATION OF REGRESSION ESTIMATORS

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Abstract. Consider the problem of choosing between two estimators of the regression function, where one estimator is based on stronger assumptions than the other and thus the rates of convergence are different. We propose a linear combination of the estimators where the weights are estimated by Mallows' C_L. The adaptive estimator retains the optimal rates of convergence and is an extension of Stein-type estimators considered by Li and Hwang (1984, *Ann. Statist.*, **12**, 887–897) and related to an estimator in Burman and Chaudhuri (1999, *Ann. Inst. Statist. Math.* (to appear)).

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