

**Tsybakov, Alexandre B.**

**Optimal rates of aggregation.** (English) Zbl 1208.62073

Schölkopf, Bernhard (ed.) et al., Learning theory and kernel machines. 16th annual conference on learning theory and 7th Kernel workshop, COLT/Kernel 2003, Washington, DC, USA, August 24–27, 2003. Proceedings. Berlin: Springer (ISBN 3-540-40720-0/pbk). Lect. Notes Comput. Sci. 2777, 303-313 (2003).

Summary: We study the problem of aggregation of  $M$  arbitrary estimators of a regression function with respect to the mean squared risk. Three main types of aggregation are considered: model selection, convex and linear aggregation. We define the notion of optimal rate of aggregation in an abstract context and prove lower bounds valid for any method of aggregation. We then construct procedures that attain these bounds, thus establishing optimal rates of linear, convex and model selection type aggregation.

For the entire collection see [\[Zbl 1026.00028\]](#).

Reviewer: [Reviewer \(Berlin\)](#)

**MSC:**

[62G08](#) Nonparametric regression and quantile regression

[62J99](#) Linear inference, regression

Cited in **3** Reviews  
Cited in **52** Documents

**Full Text:** [DOI](#)