

# **Adaptive combination of LSE and LAD in the asymmetric models**

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## **Abstract**

In the linear regression model with unknown distribution of the errors, possibly asymmetric, we derive an asymptotically optimal adaptive combination of the L1 and L2 estimates of regression parameter vector within the family of distributions with a joint median. While neither of these estimates is optimal for asymmetric  $F$ , their adaptive combination minimizes the asymptotic risk within the model, in which we have no information about the distribution shape.

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