

**Koul, Hira L.; Ni, Pingping**

**Minimum distance regression model checking.** (English) Zbl 1032.62036  
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Summary: This paper discusses a class of minimum distance tests for fitting a parametric regression model to a regression function when the underlying  $d$ -dimensional design variable is random,  $d \geq 1$ , and the regression model is possibly heteroscedastic. These tests are based on certain minimized  $L_2$  distances between a nonparametric regression function estimator and the parametric model being fitted.

The paper establishes the asymptotic normality of the proposed test statistics and that of the corresponding minimum distance estimators under the fitted model. These estimators turn out to be  $n^{1/2}$ -consistent. Some simulations are also included.

**MSC:**

**62G08** Nonparametric regression and quantile regression  
**62G20** Asymptotic properties of nonparametric inference  
**62E20** Asymptotic distribution theory in statistics

Cited in **1** Review  
Cited in **36** Documents

**Keywords:**

Kernel estimator;  $L_2$  distance; Monte Carlo

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