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# A signed-rank estimator for nonlinear regression models when covariates and errors are dependent

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## Abstract

This paper contains the proof of the asymptotic uniform linearity of a sequence of simple linear signed-rank statistics based on the residuals of a class of nonlinear parametric regression models, where regression errors are possibly dependent on the covariates. This result in turn is used to prove the asymptotic normality of a signed rank estimator of the regression parameter vector in the given nonlinear regression model where covariates and regression errors are dependent and in the errors in variables linear regression model, when the distributions of the covariates and measurement errors are known.

**Keywords** Errors not independent of covariates · Errors in variables model · Wilcoxon signed rank estimator

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