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**On nonlinear regression estimator with denoised variables.** (English) Zbl 1284.62402  
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Summary: In this paper, a class of denoised nonlinear regression estimators is suggested for a nonlinear measurement error model where the variables in error are observed together with an auxiliary variable. The programming involved in this denoised nonlinear regression estimation is relatively simple and it can be modified with a little effort from the existing programs for nonlinear regression estimation. We establish the consistency and asymptotic normality of such denoised estimators based on the least squares and M-methods. A simulation study is carried out to illustrate the performance of these estimates. An empirical application of the model to production models in economics further demonstrates the potential of the proposed modeling procedures.

**MSC:**

62J02 General nonlinear regression  
65C60 Computational problems in statistics (MSC2010)

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**Keywords:**

denoising; errors-in-variables; kernel; nonlinear regression model; measurement error; smoothing

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