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Study of the influence of gross observation errors on the Fisher information matrix. (Russian)

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Summary: The problem of stable estimation of the parameters of regression equations is considered. The influence of anomalous observations on the Fisher information matrix is studied according to the numerical scheme of LTS estimation. The necessity of constructing sampling management algorithms that provide maximization of the Fisher information as well as stability under gross observation errors is established.

MSC:

62J99 Linear inference, regression

62B10 Statistical aspects of information-theoretic topics

65C60 Computational problems in statistics (MSC2010)

Keywords:

regression analysis; measurement errors; stable estimation