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On an *L*-estimator with data-dependent coefficients *

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Abstract

A classical L-estimator is a linear combination of order statistics with *constant* coefficients. This paper studies an L-estimator which has *data-dependent* coefficients. The paper focuses on the efficiency behavior of the estimator and addresses the robustness and the asymptotics issues as well. It turns out that the random-coefficient estimator enjoys a remarkably high *absolute efficiency* relative to the most efficient estimators at a variety of light and heavy tailed models while sharing the best breakdown point robustness of the univariate median. Findings in the paper suggest that the random-coefficient L-estimator can serve very well as a location estimator and an alternative to both the median and the mean.

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