Multiple Theil-Sen Estimators

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Abstract

In this talk, we propose the Theil-Sen estimators (TSE) of parameters in a multiple linear model(LM) based on a multivariate median, generalizing the TSE in a simple LM. It is shown to be robust, consistent and asymptotically normal, and super-efficient for discontinuous errors. Simulations are conducted to compare robustness and efficiency with LSE's and to validate super-efficiency.