

Total least squares is a method, which solves linear models. In this thesis we state the basic and asymptotic properties of the method. Afterwards we show the application of non-parametric bootstrap in total least squares' design. We then simulate the quality of bootstrap estimates with pseudo-random generated data. For simulations we consider two-dimensional parameter and various settings of the base model. We use Tukey and Mahalanobis statistical depth function for sorting bootstrap resamples in the plain. The results of the simulations are favourable – they confirm the validity of total least squares bootstrapping for the real scenarios.