

In this thesis, we will introduce the James-Stein estimator, we will study its properties and compare them with other estimation methods. We will explain, what is admissibility of an estimator and figure out if our estimators are admissible. We will introduce the Bayes estimators and the empirical Bayes estimators. Furthermore, we will analyse how their properties can be examined differently. Finally, we will perform a simulation study and we will compare the quality of estimations on its results and see if they follow the explained theory. Using this, we will try to decide when is using the James-Stein estimator appropriate.