

The convolution has a big signification in mathematical statistics. In the opening chapter, we define basic terms used in the thesis and we introduce the convolution and basic relations related to this term. In the second chapter, we attend to kernel estimators, mainly the kernel density estimator and the kernel charakteristic function estimator. In the third chapter, we attend to the deconvolution and we summarize the basic theoretical properties of the deconvolution estimator. In the last chapter of this thesis we present a possible application in medicine. The properties of the proposed estimator are investigated in a small simulation study.