

Yacov Ritov_The Bayesian Paradigm on High Dimensions

We consider the Bayesian analysis of a few complex, high-dimensional models and show that intuitive priors, which are not tailored to the fine details of the data model and the estimated parameters are going to fail in situations in which simple good frequentist estimators exist. The models we consider are, partially observed sample, the partial linear model, estimating linear and quadratic functionals of a white noise models, and estimating with stopping times. We argue that these findings do not contradict a strong version of Doob's consistency theorem which claims that the existence of a uniformly \sqrt{n} consistent estimator ensures that the Bayes posterior is \sqrt{n} consistent for values of the parameter with prior probability 1.